Scarlet Gilia – Fairy Trumpet

Disclaimer:

This book is intended to provide only general information about wildflowers. Always seek the advice of a health professional before touching or eating any parts of plants. Information provided is not designed to diagnose, prescribe, or treat any illness, or injury. Always consult a health care professional or medical doctor when suffering from any health ailment, disease, illness, or injury, or before attempting any traditional or folk remedies. Keep all plants away from children. As with any natural product, they can be toxic if misused.

**This is a botanical work
based on the public domain book
"Colorado Wild Flowers" by
Harold DeWitt Roberts
and
Rhoda N. Roberts
Additional notes and images by
Larry W Jones**

Copyright 2021 © by Larry W Jones

All rights reserved. No part of this book may be reproduced or used in any manner without written permission of the copyright owner except for the use of quotations in a book review.

First edition - 2021

Book design by Larry W Jones

Published by lulu.com

ISBN – 978-1-105-52629-9

ROCKIES IN BLOOM - WILDFLOWERS

INDEX by Color Grouping	**WHITE Pg 9 - 56**
Prairie Snowball	Globeflower
Prickly Poppy	White Marsh Marigold
Mariposa Lily	Thimbleberry
Lanceleaf Spring Beauty	Field Bindweed
Easter Daisy	Arctic Gentian
Fleabane	Oxeye Daisy
Globe Anemone	Wild Chamomile
Sand Lily	Boulder Raspberry
Stickweed	Tufted Evening Primrose
Snowball Saxifrage	White Water Lily
Spanish Bayonet	Giant Evening Star
Yucca Glauca	American Bistort
Alpine Sandwort	Pearly Everlasting
Alpine Phlox	Alpine Yarrow
Tasselflower	Caraway
White Prairie Aster	Common Yarrow
Wild Strawberry	Bitter Cress
Field Mouse Chickweed	Alpine Thistle
Night-Flowering Catchfly	Elegant Death Camas
Wood Nymph	Colorado False Hellebore
Mountain Dryad	White Locoweed
Creamy Thistle	Poison Hemlock
Elkweed	White Lovage
White Clematis	Miner’s Candle

INDEX by Color Grouping

Parry's Bellflower **BLUE Pg 57 - 75**
Alpine Forget-Me-Not
Blue Columbine
Bird Bill
Bush morning Glory
Fringed Gentian
Nelson's Larkspur
Sky Pilot
One-Sided Beardtongue
Silvery Lupine
Tall Fringed Bluebell
Prairie Bluebell
Western Blue Flax
Chickory
Prairie Spiderwort
Pasque Flower
Teasel
Blue Vervain
Creeping Bellflower

INDEX by Color Grouping **YELLOW Pg 76 - 145**

Alpine Sunflower
Western Hawksbeard
Rabbit Brush
Lady Slipper
Sulphur Buckwheat
Western Wallflower
Yellow Avalanche Lily
Evening Primrose
Glacier Lily
Snow Buttercup
Stickweed
Sulphur Flower
Alpine Avens
Cutleaf Coneflower
Curlycup Gumweed
Leafy Cinquefoil
Plains Zinnia
Dwarf Mountain Ragwort
Cowpen Daisy
Globe Flower
Golden Banner
Old Man Of The Mountain
Shortfruit Evening Primrose
Prickly Pear Cactus
Shrubby Cinquefoil
Prairie Pea
Prickly Poppy
Alpine Buttercup
Yellow Evening Primrose
Spreadfruit Goldenbanner
Yellow Prairie Violet
Rockyscree False Golden Aster
Alpine Goldenweed
Yellow Monkeyflower
Broadleaf Arnica
Stemless Four-Nerve Daisy
Goldeneye

INDEX by Color Grouping **YELLOW Pg 76 - 145**

Hairy Evening Primrose
Goat's Beard
Prairie Sunflower
Heartleaf Arnica
Orange Sneezeweed
Arrowleaf Balsamroot
Mule's Ears
Creeping Barberry
Mountain Parsley
Western Indian Paintbrush
Yellow Stonecrop
Western Golden Ragwort
Prairie Groundsel
Rocky Mountain Goldenrod
Giant Goldenrod
Tall Butter-and-Eggs
Canada Goldenrod
Common Mullein
Prairie Coneflower
Little Sunflower
Black-Eyed Susan
Blanketflower
Nodding Sunflower
Yellow Pond Lily
Common Sunflower
Roundtip Twinpod
Alpine Paintbrush
Dwarf Paintbrush
Blacktip Ragwort
Arrowleaf Ragwort
Brackted Lousewort
Smooth Goldenrod
Yellow Sweet clover

INDEX by Color Grouping **RED Pg 145 - 156**

Anemone Globosa
Brook Primrose
Cactus
Common Blanketflower
Scarlet Gilia
Veiny Dock
Western Red Columbine
Wine Cup
Red Clover
Queen's Crown
Pinedrops

INDEX by Color Grouping **PINK Pg 157 - 189**

Prince’s Pine
Showy Milkweed
Fireweed
Bush Morning Glory
Lady’s slipper
Lambert’s Loco
Manystem Pea
Moss Campion
Pipsissewa
Parry’s Primrose
Red-Pod Stonecrop
Spreading Dogbane
Twinflower
Canada Thistle
Fairy Primrose
Dwarf Clover
Western Meadow Aster
Shooting Star
Pineywoods Geranium
Colorado Tansy-Aster
Fairy Slipper
Aspen Fleabane
Wild Rose
Prickly Rose
Musk Thistle
Geyer Onion
Pink Pussytoes
Charming Wallflower
Rosy Paintbrush
Common Milkweed
Rocky Mountain Bee Plant
Dotted Blazing Star
Elephant's Head

INDEX by Color Grouping **PURPLE Pg 190 - 232**

Silky Phacelia
Subalpine Larkspur
Purple Locoweed
Pasque Flower
Queen's Crown
Shooting Star
Showy Fleabane
Moss Campion
Thistle
Dwarf Clover
Wavelyleaf Thistle
Larkspur
Jewelled Shooting Star
Fireweed
Aspen Fleabane
Mountain Blue Violet
Alpine Columbine
Harebell
Common Burdock
Spotted Knapweed
Bigelo Tansy-Aster
Sticky Purple Geranium
Briton Scullcap
Hairy Clematis
Mountain Gentian
Rocky Mountain Fringed Gentian
Rocky Mountain Iris
Sky Pilot
Alfalfa
Common Grape Hyacinth
Two-Lobe Larkspur
Monkshood
Rydberg Penstemon
Tall Penstemon Penstemon
Dusky Beardtongue

INDEX by Color Grouping **ORANGE Pg 225 - 232**

Butterflyweed
Claret Cup
Indian paintbrush
Wild Lily
Sand Begonia
Wood lily
Wholeleaf Indian Paintbrush
Orange Agoseris

Prairie Snowball

The sweet sand-verbena, snowball sand-verbena, prairie snowball or fragrant verbena, is a species of sand verbena. The flowers of this plant open in the evening and close again in the morning, a habit which gives the family its common name of Four O'clocks.

Individual flowers are formed of a slender calyx tube, 1 inch long, flaring at its mouth into 5 white, petal-like lobes to make a tiny salver ¼ inch across. Numerous such flowers are clustered to form the surface of a ball about 2 inches in diameter. Plant has reddish stems, somewhat hairy, that creep on the ground, with fleshy (succulent) green leaves arranged in opposite pairs. Grows in plains on sandy soil. Blooms May-June.

The fragrance perfumes the air of early summer, especially as evening coolness comes. Sweet sand-verbena is grown in gardens for its attractive blossoms and fragrance, and to attract butterflies.

The Indigenous peoples of the Southwest use the plant as a wash for sores and insect bites, to treat stomachache, and as an appetite booster. Among the **Navajo**, it is used medicinally for boils and taken internally when a spider was swallowed. The **Kayenta Navajo** use it as a cathartic, for insect bites, as a sudorific, as an emetic, for stomach cramps, and as a general panacea. The **Ramah Navajo** use it as a lotion for sores or sore mouth and to bathe perspiring feet. The **Keres** mix ground roots of the plant with corn flour, and eat to gain weight. They also use this mixture to keep from becoming greedy, and they make ceremonial necklaces from the plant. The **Ute** use as a roots and flowers for stomach and bowel troubles, whereas the **Zuni** use the fresh flowers alone for stomachaches. The **Acoma** and the **Laguna** mix the ground roots with cornmeal and eat the mixture as food.

Prickly Poppy

Flower, 3 inches or more across, is formed of 6 brilliant white, paper-like petals, surrounding numerous golden stamens with, at the very center, a dark or even black stigma. Blossoms, in loose clusters opening over a long period, crowd each other slightly at the tops of the branching stems. Plant is 2 to 5 feet tall, with gray-green leaves divided into lobes, and with yellowish spines along the stems and leaf ribs.

The oil of the white prickly poppy was used as a fine lubricant during WWII. It was found that the oil content of the seed is 25.8% which is similar to the oil content found in soybeans.

This plant is usually avoided by cattle and many other animals that roam the southern Midwest area as it is very prickly and has limited nutritional value. The seeds are the most nutritional part of the plant. Quails and doves consume these seeds for its high oil content. Each flower produces an abundance of seeds making it a reliable food source.

The white prickly poppy exudes a yellow latex that Native Americans use for many different ailments. **Aztec** priests would use the plant in sacrificial rituals. The **Comanches** held the plant in such high regard that they would make offerings to it during harvesting. They would take the latex and use it to remove warts, treat cold sores and other skin problems. A concoction could also be made from the flower to treat congestion from the cold or the flu. The seeds can also be used as an emetic to induce vomiting or as a laxative or even as a mild sedative. The entire plant can also be used to treat bladder infection, prostate pain, or to help the throbbing pain of a migraine. A wash made from the tea can also be used to help heal sunburns or scraped skin. The plant is also smoked during some important ceremonies to induce a euphoric and mild sedating effect. However, if not used properly, the plant can be very toxic.

Mariposa Lily

Flower, more than 1 inch in diameter, is formed of 3 perianth segments, which are narrow, greenish and sepal-like, and 3 segments which are broad, showy and petal-like. On the inner surface of these latter, near the base, are large, hairy glands of dark color. Stem is slender, 8 to 20 inches tall, with few linear leaves, and comes from a deeply buried corm. Grows in fairly heavy clay soils on open grassy slopes in foothills and lower montane zones. Blooms June-July.

The name mariposa resemble butterflies floating above the other flowers, as the Spanish name implies. Our species is one of the most beautiful, with its tall stem and subtle coloring resembling a small white tulip with grass-like leaves. Other species are creamy, yellow, orange, pink, lavender, gray; some of them quite small, with pointed hairy petals.

Some Calochortus species are cultivated as ornamental plants by specialty nurseries and botanic gardens to sell. The bulbs are planted for their flowers, in traditional, native plant, and wildlife gardens; in rock gardens; and in potted container gardens for those needing unwatered Summer dormancy.

Flowers can be white, yellow, pink, purple, bluish, or streaked. The insides of the petals are often very 'hairy'. These hairs, along with the nectaries, are often used in distinguishing species from each other.

The bulbs of many species were eaten by **Native Americans**. These bulbs were eaten raw or gathered in the fall and boiled, and the flower buds when young and fresh. They were eaten by the **Mormon settlers** between 1853 and 1858 when famine threatened new immigrants in the Great Salt Lake Valley, due to crop failures.

Native Americans called Calochortus "sego". They used it as food, in ceremonies and as a traditional medicinal plant.

Lanceleaf Spring Beauty

Flower is ½ inch across of 5 pale rose-colored petals, notched at the end and with veins of darker shade. Sepals are only 2; plant is 6 inches or less in height, with succulent stems and rather broad lance-shaped leaves which rise almost as high as the loose raceme of 3 or more flowers. Grows in rich soil montane and foothill zones. Blooms immediately after snow melts which is late May to July, or much earlier on warm slopes.

The plants of this species that grow in foothill locations often have quite bright rosy color. They have been reported as early as January, and by mid-March they are often abundant under scrub oaks on sunny foothill slopes. It often forms a carpet or ground cover of pale pink bloom in the fields of glacier lilies. Another species, Claytonia megarhiza, has a big root, to store food and moisture, and grows in the alpine zone.

This plant is native to western North America as far south as New Mexico where it grows in foothills up to alpine slopes. It thrives in the rocky soil of alpine climates where the snow never melts. It is a perennial herb growing from a tuber one to three centimeters wide. At its smallest the plant bears only its first two rounded leaves before flowering and dying back. The star-shaped flowers come in inflorescences of three to 15 blooms and they are white or pink, often with veiny stripes and yellow blotches near the base of each petal.

The fruit is a small capsule containing 2 seeds, which are black and shiny. The entire plant is edible raw or cooked, including the potato-like corm from which it grows. **Native Americans** ate the roots and pods, which can be cooked and eaten like potatoes. The leaves can be eaten raw or cooked. The Okanogan-Colville, Okanogan, and Thompson Native American peoples used the tuber of this plant for food and for animal fodder.

Easter Daisy

Flower heads, 2 inches across, are formed of about 30 white rays, slightly striated and indented at the tips, surrounding a disc, about ¾ inch in diameter, of numerous tubular gold-colored florets. Plant is part of the aster family, about 3 inches high and carries one or several flower heads right on the top of a spreading tough root crown from which also rise numerous, narrow, linear leaves about 2-3 inches long. Grows on grassy plains, and foothills. Blooms April-May.

These are among the very earliest of the plains flowers. Their typical occurrence is as isolated plants, one here and one there between grass turfs in areas of rather tight prairie sod. They are so low and compact that they are not easy to find, even though their beauty well justifies the search. Spring has come when Easter daisies are out, even though the plains are still clad in winter gray with only a faint suggestion that in time the range will be green. Several other members of this daisylike genus are found in the foothills and plains. One of the commoner of these, Townsendia eximia, is easily distinguished by its short spreading branches which carry a few leaves.

Easter daisies have relatively few, but quite diverse uses by Native Americans. Navajos used the plant as a gynecological aid; leaves were chewed directly or used to prepare an infusion to be taken during childbirth to ease the delivery. They were also used as part of the **Navajo** unraveling ceremony, a healing ritual designed to remove “ugly things” from the patient’s body. **Blackfoot** Indians prepared a decoction of Easter daisy roots which they gave to tired horses to help them recover.

Fleabane

Flower head, 1½ inches across, is composed of about 200 narrow rays of brilliant white color, surrounding a button-like center ½ inch in diameter, of numerous, bright-gold, tubular florets packed closely together. Plant is 1½ to 3 feet high, freely branching, with numerous flower heads; leaves oblong or oval 2-3 inches long. Grows in shady places, rich moist soil, montane and sub-alpine zones. Blooms late July-September.

As the season advances, these aster-like flowers become the most conspicuous color notes in our high-altitude aspen groves. Before they too are gone a leaf here and there on the geranium plants in these same places will have turned bright red; on the ground, ivory colored puff-balls will be ready to discharge their clouds of brown spores, and the very first of the aspen leaves will have turned yellow and be drifting down. Showy fleabanes may linger to catch the first fall snows.

Its English name appears to be derived from a belief that the dried plants repelled fleas or that the plants were poisonous to fleas. Only the leaves are edible. They are hairy so they have a somewhat ‘furry’ texture making eating them raw not exactly too pleasing. They can be used wherever you cook with greens. Daisy fleabane leaf extracts contain caffeic acid which is an active compound that has antioxidative and neuroprotective effects on neuronal cells.

Fleabane’s hairy stems are the source of the genus name, Erigeron, which roughly translates to “old man in the spring.” Its common name, like those of other “-banes”—wolfsbane, dogbane, leopard’s bane, henbane—alludes to the folklore that they have the ability to kill or ward off pests. Historically, fleabane was burned or dried in sachets to repel fleas, gnats, flies, and all other manner of tiny, annoying creatures, though there is little evidence of its effectiveness as an insect repellent.

Globe Anemone

Flower, ¾ inch in diameter, of 5 to 9 showy petal-like sepals, white, deep red, occasionally yellow, forms a shallow cup around the numerous stamens and a conspicuous group of pistils which, after the flower fades, become a round thimble-shaped seed cluster. The pedicels, bearing the solitary flowers at their tips, are several inches long and covered with silky hairs. Plant is about 1 foot tall, with subdivided leaves near the base and on the sparingly branched stems. Grows in partial shade in montane zone. Blooms June-July.

This globe anemone, related to the better known pasque flower, is one of the many less conspicuous plants that add to the charm of a flowery hillside, yet reserve their more delicate beauty for those who take time to prowl. Anemone canadensis is a somewhat larger plant with pure white flowers, rather woody stems and deep green foliage. It grows in shady places along foothill streams, but only where conditions are to its liking. In these spots it forms rather dense colonies.

All parts are poisonous when fresh. Toxic if eaten in large quantities. American Indians used a whole-plant tea as a wash to kill lice and fleas. Leaves were eaten or a tea of aboveground parts consumed during sweat baths for rheumatism. Leaves or root pappi were stuffed in the nostrils to treat nosebleed. Leaves were crushed and fumes inhaled for colds and lung problems.

The ripe seed-head "cotton" was burned on hot coals and the smoke inhaled for headaches. Plants were used to induce abortion. The undried plant is highly irritating and toxic. Dried or fresh plant is a potentially dangerous urinary tract irritant and may cause liver damage.

Sand Lily

Flower is an inch in diameter, of 6 petals and sepals all alike (perianth segments) united at their base into a tube over an inch long. Several of these rise from the buried crown of the plant, as do also the leaves, ⅜ inch wide and over 6 inches long, resembling heavy curved blades of grass. The matted, cordlike roots store, through the long dormant period, the starches and sugars needed for rapid Spring growth. Grows in sandy soil in plains or low foothills. Blooms April-May.

When sand lilies begin to dot the gray plains with their singularly pure white stars we can know that the season of growth and color is returning. To pluck them one by one and suck the drop of nectar from the long white tube is one of the delights of childhood. The plants are crowded with flowers during the blooming season, but, when it is over, disappear completely from the scene.

Habitat: Found in sunny grassland areas ranging from the plains into the foothills at elevations between 3,500 and 8,000 feet. It requires full sun and will not tolerate shade. Native plants do not require amended soil and are drought tolerant once established. It is native to the western United States, primarily in the Rocky Mountains and the Great Basin. This species is a perennial plant growing from a deep system of fleshy roots. It is stemless, growing no more than about 10 cm (4 in) tall. It produces tufts of long, narrow leaves sheathed together at the bases. The inflorescence is an umbel-shaped cluster of flowers amidst the foliage. The fragrant flower has six white tepals atop a narrow tube 2–3 cm long. The species is dimorphic in its pollen production, with two distinct pollen forms occurring in separate populations.

The **Paiute** and **Shoshoni** Indians used a poultice of the pulverized roots and applied it to sores and swellings.

Stickweed

Flowers, about 2 inches wide, are formed of 10 narrow, creamy, petals which spread wide and surround a radiating cluster of 100 or more pale stamens as long as the petals. Plant is 2 to 4 feet high of white shiny stems branching freely from one main stem, and rather sparsely covered with deeply indented, light green leaves of a peculiar rough texture. Grows on plains and low foothills. Blooms July-August.

The leaves of this plant are covered with minute barbed hairs which cling to cloth so firmly that a spray of several flowers placed upon a coat lapel will stay almost as dependably as if fastened with a pin. They have the feel of fine-grained sandpaper. The flowers are very responsive to light conditions.

All through the morning and well into the afternoon they are tightly closed, then about four o'clock, or a half hour earlier if clouds reduce the light, they spread into full bloom. This opening proceeds so rapidly that the movement of the petals is quite easily seen. In a period of twenty minutes or less a colony of the plants will change its whole appearance from inconspicuous weeds to a gorgeous display of big pale stars. A related species, Mentzelia decapetala, has even larger flowers of deeper cream color. It waits until after sundown to open.

Some fascinating details about stickleaf's strategy for producing nectar. Each stickleaf flower blooms six evenings in a row before its petals drop off. During those six days, it produces nectar at the top of its flower's ovary. That nectar attracts bees and flies, burrowing through the thick forest of stamens to get to the nectar. After the flower drops its petals, it continues to produce nectar for another 10 days.

Snowball Saxifrage

Individual flowers are ¼ inch or less across, each with 5 white petals, and are grouped in a compact, round-topped head about 1 inch in diameter which forms the top of a naked stem (scape). This scape rises to a height of 8 inches, or sometimes much less, from the center of a flat circle of oblong, leathery leaves. As the blossoms age, the flower cluster becomes loose and sprangly. Grows on moist slopes in sub-alpine and montane zones. Blooms May-July.

Saxifrage is another large family of quite varied sorts. Gooseberries and mock orange come within its membership. The numerous species of alum root, Heuchera, are also included, as are many little alpine and sub-alpine plants that grow out of rock crevices in our high mountains. Purple saxifrage, Saxifraga jamesii, with quite large red-purple flowers, and dotted saxifrage, Saxifraga austromontana, with tiny white flowers covered with pale dots, are among the best. All of these seem able to thrive on only a teaspoonful of soil in a rock crack, if only there is local moisture. The structural features that bring all these plants within one family are not obvious. The leaves of many of them are similar to the leaves of a gooseberry bush, though in some this resemblance is remote, and in others entirely absent.

The name Saxifrage means ‘rock splitter’, referring to its diuretic action and use in ridding the body of gall and urinary stones. Alumroot (Huechera spp.) leaves and roots are a potent astringent used for vomiting, diarrhea, sore throats, mouth sores, wound treatments, and hemorrhoids, although not as abundant as other herbs available for these purposes.

Spanish Bayonet

Spanish bayonet is an erect, woody evergreen shrub that produces large (1-3 feet) terminal panicles of showy white flowers. Individual blooms are six-parted, bell-shaped and droop downward. They are often tinged with purple. Leaves are long, dark green and linear to lanceolate in shape. They are stiff and sharply tipped.

Spanish bayonet occurs naturally in sandhills, dry thickets, disturbed sites, and coastal strands, hammocks and grasslands. It flowers spring through fall and provides food and cover for a variety of wildlife and pollinators. The blooms are frequented for their nectar by hummingbirds and butterflies such as the great southern white. Spanish bayonet is also the larval host plant for the cofaqui giant skipper and yucca giant skipper butterflies.

Fully ripe fruit - raw, cooked or dried for winter use. A staple food for several native North American Indian tribes, the fruits are large, fleshy, sweet and palatable. The ovoid fruit is about 17cm long and 7cm wide. Considered to be a luxury by the native North American Indians, the fruits were often baked in ovens. The cooked fruit can be formed into cakes and then dried for later use.

Large quantities of the fruit has caused diarrhoea in people who are not used to it. The dried fruit can be dissolved in water to make a drink. Flower buds - cooked. A soapy taste. The older flowers are best, they are rich in sugar. The flowers, harvested before the summer rains (which turn them bitter), have been used as a vegetable. Flowering stems - cooked. Harvested before the flowers open then roasted. Seed - cooked. It can be roasted and then ground into a powder and boiled. The tender crowns of the plants have been roasted and eaten in times of food shortage. The young leaves have been cooked as a flavouring in soups. The fruit is eaten by birds and sometimes by humans, and the flowers can be served as a salad or cooked. Pioneers made rope and string from the fibrous leaves.

Yucca Glauca

Yucca glauca is a species of perennial evergreen plant, adapted to xeric (dry) growth conditions. It is also known as small soapweed, soapweed yucca, Spanish bayonet, and Great Plains yucca.

Yucca glauca forms colonies of rosettes. Leaves are long and narrow, up to 60 cm long but rarely more than 12 mm across. Inflorescence is up to 100 cm tall, sometimes branched sometimes not. Flowers are pendent (drooping, hanging downward), white to very pale green. Fruit is a dry capsule with shiny black seeds.

Yucca glauca is native to central North America: occurring from the Canadian Prairies of Alberta and Saskatchewan in Canada; south through the Great Plains to Texas and New Mexico in the United States.

Soapweed yucca was a traditional Native American medical plant, used by the Blackfoot, Cheyenne, Lakota, and other tribes.

Among the Zuni people, the seed pods are boiled and used for food. Leaves are made into brushes and used for decorating pottery, ceremonial masks, altars and other objects. Leaves are also soaked in water to soften them and made into rope by knotting them together. Dried leaves are split, plaited and made into water-carrying head pads. Leaves are also used for making mats, cincture pads and other articles. The peeled roots are pounded, made into suds and used for washing the head, wool garments and blankets. The young flower stalks and unripe fruits can be cooked and eaten.

Alpine Sandwort

Twinflower sandwort, also called alpine sandwort, is found in alpine tundra throughout the West. The word tundra comes from the Finnish word “tunturia” which means treeless land. Alpine tundra is found on mountain tops above the elevation where trees will grow. At these elevations, often above 11,000 feet, the summers are short, freezing temperatures are possible at any time, there are harsh drying winds, and the sunlight is intense.

The soils tend to be rocky, dry, and nutrient poor. Twinflower sandwort is a cushion plant, which is a term that describes the growth form of many alpine tundra plants. Apparently, this growth form works well to protect plants from alpine weather extremes because it has been adopted by many unrelated alpine plants. The cushion shape helps protect tender parts from frost and high winds, helps retain moisture, and holds in heat. Studies have shown that the temperature within a plant cushion can be up to 10 centigrade degrees higher than the ambient temperature.

Twinflower sandwort makes tidy little ground-hugging mounds with only its small leaves exposed to the weather. The flowers are on short stalks barely above the cushion and many of them pop up at once to cover the cushion with color. Like most cushion plants, twinflower sandwort needs to be seen close-up to appreciate its beauty. But, a visit to the alpine tundra is exhilarating and well worth the trip to see twinflower sandwort and its other ground-hugging tundra friends. Twinflower sandwort and many other tundra plants have a short blooming period; the best time to see them is usually late July and early August.

Alpine Phlox

Phlox subulata 'Early Spring White' (Early Spring Series). It will produce white, lavender-blue or pink flowers. Other names: Alpine phlox 'Early Spring White', Creeping phlox 'Early Spring White', Moss phlox 'Early Spring White', Phlox subulata 'Barseventythree.' A prostrate, mat-forming, evergreen perennial with linear, needle-like, mid-green leaves and star-shaped, white flowers from late spring to early summer.

Phlox muscoides (syn. P. bryoides) - Shoshone phlox. A plant of the high desert, cold alpine tundra, Phlox muscoides makes hunched, white-matted domes. The high altitude habitat exposed to intense solar radiation, extreme wind speeds, and bare rock allows only for the survival of the most stalwart. Phlox muscoides, and its cantankerous silver foliage, was first named by English botanist Thomas Nuttall in his 1834 westward expedition.

Shoshone phlox is very difficult to grow except in perfect alpine or rock garden conditions. It is extremely difficult to cultivate, a characteristic long-lamented.

Phlox pulvinata - alpine phlox. This prefers to plant its roots where it can score a good view – in the highest parts of the Rockies overlooking the plains and the Pacific. She is one of the first flowers to bloom in the spring, decorating the color-starved fell-field she inhabits with bunches of delicate whitelavender cushions: vivid next to the nearby sea-green and orange lichen.

Although the alpine phlox lives above the timberline, it is one of the most adaptable of the high-altitude phlox species – a benefit for the below-the-timberline dwelling rock gardeners.

Tasselflower

Brickellia grandiflora, the tassel flower. The species epithet of this plant is derived from the Latin words grandis, meaning large or abundant, and floris, meaning flower. So this descriptor can be interpreted as indicating either a plant with large flowers or a plant with many flowers. Some other common names for tassel flower are tassel-flowered bricklebush, large-flowered bricklebush, and golden sashay. Tassel flower is an herbaceous perennial with a single stem that may become somewhat woody at its base.

The slightly hairy stem may become branched along its upper part producing a plant up to 40 inches tall. The leaves are borne on a petiole that is shorter than the leaf blade, which is triangular in shape and coarsely toothed. When the leaf blade is viewed from the above, its distinct main veins and elongated lance-shaped tip are apparent. Close inspection of the grayish underside of a leaf reveals glands appearing as small dots that make the leaf sticky and aromatic.

Tassel flower has a long history of medicinal uses. **Navajos** prepared an infusion of dried leaves to treat headaches. The **Western Keres** used an infusion as a liver medicine and treated rheumatism with a salve prepared from dried leaves. Tassel flower is known as prodigiosa or amula by **Mexican herbalists** today where it is claimed to lower blood sugar levels and therefore used in treating type II diabetes. It is also purported to increase digestive secretions, including bile and therefore is believed to help flush out small gallstones.

White Prairie Aster

Symphyotrichum falcatum (formerly Aster falcatus) is a species of flowering plant in the aster family. It is native to a widespread area of central and western North America. Symphyotrichum falcatum common names include white prairie aster, western heath aster, creeping white prairie aster, falcate aster, and little grey aster. The variety S. falcatum var. commutatum is known commonly as white prairie aster, western heath aster, and little grey aster, as well as cluster aster.

Flowerheads of symphyotrichum falcatum are formed of between 15 and 35 ray florets (generally at least 20), usually colored white, less often pink or pale blue, and about one inch long, around a similar number of yellow disc florets, which become reddish then brown as they mature. Underneath are three or four rows of green (whitish at the base) phyllaries; those lower down are relatively broad, and widest towards the tip, while those above are narrower and more linear in shape. Phyllaries are topped by a tiny spine, and they angle outwards or bend backwards when the flowerhead is fully mature.

The narrow, light green leaves are also usually spine-tipped, and they have a sparse to dense covering of strigose hairs (more evident for leaves higher up the stem), as do the brown or reddish stems. Basal and lower/mid stem leaves are similar in size, while those towards the top of the stem are often slightly longer, but narrower, no more than 0.1 inches across.

The **Zuni** people mix the ground blossoms of S. falcatum var. commutatum with yucca suds and use this to wash newborn infants in the belief that it will make their hair grow and strengthen them.

Wild Strawberry

Wild strawberry, is a low-growing, perennial, herbaceous (i.e. not woody) plant growing less than 1 foot tall. It is a creeping plant, producing new plants along runners (stolons) that extend sideways along the surface of the soil, rooting as they grow. They provide food for many small animals and birds. Wild strawberry is a native plant found in much of the US and Canada.

Leaves: Leaves that extend from the base of the plant are composed of long hairy petioles (leaf stems) and three leaflets. Each leaflet is 1 to 1.5 inches long, with toothed edges.

Flowers: Individual flowers (less than one-inch diameter) have five white petals surrounding a yellow center with many stamens. Flowering time is April to June. Fruit: Wild strawberries resemble cultivated strawberries, but they are smaller.

This plant is deciduous but leaves remain green throughout the winter, so observers will need to look carefully to determine whether they see “initial growth” or last year’s leaves. In early spring, when the snow is receding and before the grass turns green, little active growth occurs. If you see strawberry leaves then, they’re probably last year’s. Check back the next week to be sure. When the grass starts to green up you’ll probably see strawberry greening up as well. Look for new fresh growth from underneath the old leaves. “Initial growth” (on the data sheet) will be leaves; flowers develop sometime in May, and fruits appear in June.

Ever since ancient times, all parts of wild straw berry have been used as herbal medicine. The leaves and roots have been used in herbal teas to improve bile and liver function, to treat inflammation of the bowel, and the berries have been used as a diuretic and an herbal remedy for gout.

Field Mouse Chickweed

Mouse-ear Chickweed is an introduced plant that is widely naturalized from Europe. It can be a perennial or rarely an annual. The stems may be erect, up to 12 inches high but they are frequently sprawling. Multiple stems branch from the base. Those stems that do not flower will often root at the nodes.

The leaves are opposite, oval near the base of the stem and more lance shaped toward the top, stalkless, about 1 inch long and 1/3 as wide, covered with fine hair and with a prominent central vein. Leaves are widely spaced along the stem and leaves of sterile shoots are reverse lance-shaped.

The inflorescence is a small cyme with 1 to 5 flowers. At the base of the cyme are small bracts that have thin dry upper margins. Occasionally the cyme may have glandular hair. The genus name Cerastium, is from the Greek kerastes, meaning 'horn' and referring to the shape of the seed capsule of this genus. The species, fontanum, is a Latin word, referring to springs or running water, which is somewhat obscure since this plant is not a water plant. The subspecies vulgare, means 'common;. The author name for the plant classification - ‘Baumg.’ is for Johann Christian Gottlob Baumgarten (1765-1843) German physician and botanist whose prime work in botany was the study and publication in 4 volumes of the flora of Transylvania.

The young shoots are edible and have been used as salad greens. In homeopathy, the plant is used to relieve rheumatic pains and psoriasis. Chickweed is noted as a folk remedy for many conditions, including asthma, blood disorders, conjunctivitis, constipation, inflammation, dyspepsia, skin ailments, and obesity.

Night-Flowering Catchfly

Silene noctiflora is a species of flowering plant known by the common names night-flowering catchfly, nightflowering silene and clammy cockle. It is native to Eurasia, but it is known on other continents as an introduced species and sometimes a weed. In North America, it is a common weed of grain crops in the Canadian prairie provinces and in much of the United States. It grows in fields and in other disturbed habitat.

The night-flowering catchfly is an annual herb producing a hairy, glandular stem up to about 75 or 80 centimeters in maximum height. It is sticky in texture. The hairy, widely lance-shaped leaves grow in opposite pairs and are up to 14 centimeters long and 5 wide, the largest ones located low on the stem. The flowers are nocturnal, and occur in an open cyme of up to fifteen blooms, each borne on an erect pedicel. The flower is encapsulated in a hairy calyx of fused sepals lined with a netlike pattern of veining. The five petals are white to pink and each has two lobes at the tip. They measure up to 2.5 centimeters wide when fully open. The fruit is a yellowish-brown capsule with six chambers which splits open to release the seeds. As night falls the flowers of the night-flowering catchfly open and release a strong fragrance which attracts night-flying moths which feed on the copious nectar and pollinate the plant.

Besides being a competitive weed, the night-flowering catchfly is host to some plant pathogens that can spread to crop plants, including tobacco streak virus and Lychnis ringspot virus. Per the outstanding website Native American Ethnobotany are the following uses of silene noctiflora: Menominee - used as unspecified medicine. **Navajo** and **Rahma** - poultice of leaves applied to prairie dog bite.

Wood Nymph

The unusual, nodding, easily-recognizable flowers of moneses uniflora are formed of five white, ovate petals and five shorter, round-tipped petals, at the end of a short, unbranched, green stalk, the tip of which curves downwards, so only the underside of the flowerhead is easily visible. Petals have somewhat ragged edges. At the center of the flower are a ring of ten, inwards-curving stamens around a thick style with a protruding, lobed stigma - all are green in color. Flowers and stems have a waxy appearance. The flower head is about one inch in diameter.

The plant is one of few species that flourish in cool, shady, moist locations in woodland, though the small size and upturned flowers can make it hard to spot. It spreads via roots, so several plants are often found in close proximity.

Moneses uniflora, known also as one-flowered wintergreen (British Isles), single delight, wax-flower, shy maiden, star of Bethlehem (Aleutians), St. Olaf's candlestick (Norway), wood nymph, or frog's reading lamp, is a plant of the family of Ericaceae, that is indigenous to moist coniferous forests in temperate regions of the Northern Hemisphere from Spain to Japan and across North America. It is the sole member of genus Moneses.

A tea of the dried plant has been used in the treatment of coughs and colds. The plant has been chewed, and the juice swallowed, as a treatment for sore throat. A poultice of the leaves has been used by the **Cowichan** Indians to draw out the pus from boils and abscesses, to draw blisters, to help reduce swellings and also to relieve pain. The **Kwakiutl** Indians used a poultice of chewed or pounded plants applied to swellings and pains.

Mountain Dryad

Dryas octopetala, the mountain avens, eightpetal mountain-avens, white dryas or white dryad, is an Arctic–alpine flowering plant in the family Rosaceae. It is a small prostrate evergreen subshrub forming large colonies. The specific epithet octopetala derives from the Greek octo (eight) and petalon (petal), referring to the eight petals of the flower, an unusual number in the Rosaceae, where five is the normal number. However, flowers with up to 16 petals also occur naturally.

As a floral emblem, it is the official territorial flower of the Northwest Territories and the national flower of Iceland.

The stems are woody, tortuous, with short, horizontal rooting branches. The leaves are glabrous above, densely white-tomentose beneath. The flowers are produced on stalks 3–10 cm (1.2–3.9 in) long, and have eight creamy white petals - hence the specific epithet octopetala. The feathery hairs of the seed head first appear twisted together and glossy before spreading out to an expanded ball which the wind quickly disperses.

Dryas octopetala has a widespread occurrence throughout mountainous areas where it is generally restricted to limestone outcrops. These include the entire Arctic, as well as the mountains of Scandinavia, Iceland, the Alps, Carpathian Mountains, Balkans, Caucasus and in isolated locations elsewhere. In Great Britain it occurs in the Pennines (northern England), at two locations in Snowdonia (north Wales), and more widely in the Scottish Highlands; in Ireland it occurs on The Burren and a few other sites. In North America it is found in Alaska, most frequently on previously glaciated terrain, and through the Canadian Rockies reaching as far south as Colorado in the Rocky Mountains. It grows in dry localities where snow melts early, on gravel and rocky barrens, forming a distinct heath community on calcareous soils.

Creamy Thistle

There are many thistles, both native and introduced, in the area. All have spiny leaves. Flower heads have disk flowers only. Colors range from creamy white to yellow to lavender to purple, even in the same species. They are difficult to differentiate. Flora of North America explains the complexity. There are 20 native thistle species in Colorado. How do you tell a native thistle from a noxious thistle? Generally, if the stand of thistles is very dense or very tall (6ft), it is usually noxious. If you are above timberline and see a thistle, it's probably native. Native thistles tend to be short, often white, and are usually only found as individual plants or in very small groups of 2-4 plants.

Creamy thistle is a perennial growing to 3 feet tall, with a stout, branched, cobwebby stem. Creamy thistle flowers from July to September. Flower heads are 1 ¼ inch high, with creamy white to pink disk flowers and no ray flowers. Leaves are up to 8 inches long, bright green on top and whitish beneath, extending down the stem, with spines of varying lengths on the margins. This thistle is a much lighter pink (or even white), so it is easy to distinguish from musk thistle, and is generally taller with bigger flower heads than canada thistle.

Creamy thistle is a buΣerfly plant, and its seeds are eaten by songbirds. Its foliage is not eaten by livestock, deer, or pronghorn. Poisoning: None. Creamy thistle is generally not considered to be a problem weed, but sometimes is it mistaken for the more weedy species of thistles.

Elkweed

Elkweeds live for up to 80 years as a simple basal rosette of leaves until they finally develop a towering flower stalk with hundreds of flowers. These long-lived, perennial plants are monocarpic, which means that they will flower only once and then die.

Elkweed flowers have four, pale greenish, purple-spotted petals, each with a large basal gland. The smooth, green, leaves are in whorls about the stem and are largest towards the base of the plant. The towering flower stalks are up to 8 feet (2.4 m) tall.

Plants in the genus Frasera, commonly known as Green Gentians, are in the Gentian Family (Gentianaceae). Elkweed was formerly known as Monument Plant or Deer Ears (Swertia radiata).

In non-flowering plants, the leaves of the huge basal rosette are long, narrow, smooth, and pale green. The number of leaves in the swirl of basal leaves roughly corresponds to the age of the plant. In flowering plants, the leaves along the flower stalk are also long and narrow, arranged in whorls of four to six, becoming shorter toward the top of the plant.

Occurs in the foothills, montane, subalpine, and alpine zones. It is found in meadows and openings and can grow is full sun or part shade.

The whole plant is febrifuge, pectoral, laxative and tonic. An infusion of the dried, powdered leaves, or the root, has been used in the treatment of diarrhea. A cooled decoction of the roots has been used in the treatments of asthma, colds, digestive complaints, etc. An infusion of the plant has been used as a contraceptive. The root, when ground into a powder and then mixed with oil, has been used as a parasiticide in order to kill lice.

Globeflower

American globeflower is one of the 20 species of the buttercup family (Ranunculaceae) and it has typical buttercup-like flowers. Within the buttercup family, it is most similar to anemone (Anemone spp.)

American globeflower grows in the Northeast and in the Rocky Mountain West. The two areas are widely separated and the plants of each region have been assigned to their own subspecies; plants in the West have white flowers and are called subspecies albiflorus, plants in the Northeast have yellow flowers and are called subspecies laxus. Some botanists think the differences are great enough to treat the eastern and western plants as two separate species.

American globeflower grows in swamps and bogs in the east and in high-mountain to subalpine bogs in the west. It is a perennial herb that often emerges and flowers in the spring well before most of the other bog plants begin to grow. American globeflowers are among the first wildflowers to emerge after spring snowmelt in the boggy parts of western subalpine meadows.

Fresh globe flower plant is UNSAFE. It contains substances that are very irritating to the digestive tract, causing stomach pain and diarrhea. Fresh globe flower can also irritate the kidney, bladder, and other parts of the urinary tract. Skin contact with the fresh plant can cause blisters and burns that are difficult to heal. There isn't enough information to know whether the dried plant might be safe or what the possible side effects might be.

All species of Trollius are poisonous to cattle and other livestock when fresh, but their acrid taste means they are usually left uneaten. They are, however, used as food plants by the larvae of some Lepidoptera species including silver-ground carpet.

White Marsh Marigold

One of the earliest harbingers of spring in the Rocky Mountain west is the bright and lovely white marsh marigold. Blooming along the edges of subalpine wetlands and meadows soon after snowmelt, abundant flower displays can often be enjoyed in early May to July. Its large white flowers and glossy heart-shaped basal leaves can easily identify this member of the Buttercup family. Plants are about 5 to 10 centimeters tall with flowers on solitary stalks of 3 to 10 cm. The flowers have no real petals but many white sepals that look like petals. Masses of yellow stamens brighten the flower center.

"Caltha" is derived from the Greek word kalathos, "a goblet," a reference to the flower shape. This plant is not a true marigold (which is actually a member of the daisy family), but a marsh-loving buttercup relative. The species name "leptosepala" means slender sepals. The young leaves are purported to make an excellent potherb by some references, however other authorities warn against eating any part of this species and its Eastern sister species, Caltha palustris, which has been reported to cause toxicity and livestock losses.

Caltha leptosepala is widely distributed in mountainous areas from Alaska south through the Rocky Mountains to Colorado, Utah, and Arizona. It is found westward to northeastern Nevada and southeastern Oregon.

Every part of this plant is strongly irritant and so it should be used with caution. It has been used to remove warts and is also used in the treatment of fits and anaemia. The root is used in the treatment of colds. A poultice of the boiled and mashed roots has been applied to sores. A tea made from the leaves is diuretic and laxative. All parts of the plant can irritate or blister the skin or mucous membranes.

Thimbleberry

Growing in large patches, Thimbleberry (Rubus parviflorus) is a beautiful shrub with prominent white blossoms and large star-shaped leaves that form a dense cover. The stems are thornless. Showy clusters of fragrant white flowers attract bumblebees and other pollinators. The edible berries that appear in mid to late summer are quite popular with the birds, and you'll be racing them to sample the bounty! The Leaves turn brilliant orange to maroon in fall.

Most commonly found on the margins of moist shaded forests, Thimbleberry grows easily in any rich medium-moist soil, but also tolerates drier and poorer conditions. It can handle brief seasonal flooding. Thimbleberry will grow in full shade, but the shrub will be more lush and bear more fruit when it receives more light. Excellent uses and planting opportunities include informal hedges, bird and wildlife gardens, erosion control on steep hills and stream banks. Best grown in areas where it can naturalize and form a colony, Thimbleberry provides a valuable food source and cover for songbirds, game birds, and small mammals. It is a host plant for the Yellow-Banded Sphinx moth.

Planting and Cultivation Notes - The flowers of Rubus parviflorus are self-fertile and a single shrub will produce fruit, however it will produce more abundantly when two or three of the shrubs are present. If an abundant yield is desired, keep the older canes. Unlike other raspberries, the best yields occur on canes 2-3 years old. The berries, leaves and roots helps to treat stomach ache, wounds, reduce scarring as well as swelling. The berries are consumed fresh as well as dried. The young roots, shoots and leaves are used to cure ailments. A tea made from leaves and roots act as a tonic to treat nausea, diarrhea, vomiting and dysentery. It helps to tone, strengthen stomach and increase appetite. Thimbleberry is also used to enhance immune system and prevent scurvy.

Field Bindweed

Field bindweed, Convolvulus arvensis, is a native of Eurasia that first was documented in California in 1884 in San Diego. By the first quarter of the twentieth century, field bindweed was proclaimed the worst weed in California and many other Western states. It most likely arrived in the United States as a contaminant in farm and garden seeds. However, because of its flowers and climbing nature, some seeds were probably planted as ornamentals, as a ground cover, in hanging baskets, or on trellises. Field bindweed has been given many names including perennial morningglory, creeping jenny, bellbine, sheepbine, and cornbind.

The first two leaves (cotyledons) of a field bindweed seedling are nearly square with a shallow notch at the tip. Plants that arise from underground stems lack these seed leaves. The first true leaves are arrowhead shaped and have petioles (leaf stems) that are flattened and grooved on the upper surface. Mature field bindweed plants have arrowhead-shaped leaves that can be 1/2 to 2 inches long, depending on environmental conditions. Mature leaves at the base of the stem are larger than the young leaves at the stem terminal. The flowers are trumpet shaped, white to pink, and 1 to 1 1/2 inches wide.

Field bindweed is one of the most persistent and difficult-to-control weeds in landscapes and agricultural crops. It has a vigorous root and rhizome system that makes it almost impossible to control with cultivation between desirable plants or broad scale tillage alone; in fact, it often spreads the infestation. Its seed has a long dormancy and can last in soil for up to 60 years. It has a climbing habit that allows the plant to grow up. In addition rhizomes have the ability to penetrate through fabric, plastic, and other barriers. Field bindweed also is very drought tolerant and once established is difficult to control even with herbicides.

Arctic Gentian

Arctic Gentian is a late summer bloomer that can be abundant over large areas of alpine meadows. The flower is several inches tall, almost as tall as the entire plant. Flowers are creamy white to green white, with very strong streaks of purple on the outside and dots of purple on the inside. "Gentianodes" is Greek for "similar to a Gentian". "Algida" is from the Latin for "cold". This plant was first collected in Siberia and described in 1788.

Gentiana is a large genus of more than 350 species. It is named after Gentius, the last king of Illyria (western Balkans) before its conquest by Rome in 168 BC.

Found only at high altitudes in the Rockies and in much of Alaska - it can be locally abundant in alpine meadows in those areas where it is found. Found in: AK, CO, MT, NM, UT, WY.

The corolla lobes of Gentiana algida are pale yellow to a pale yellow-green with blue stripes toward the tips, with pleats between the lobes (plicae.) The anthers will fade with age as the stigma splits along its vertically linear divide. The flowers are bell or funnel shaped when opened. It blooms in late summer. While there is a dense rosette of basal leaves, there are also 1 to 3 pairs of caudle leaves on the plant, which grows to about 8 inches tall.

When temperatures suddenly drop, the flowers will begin to close. Only when the temperature begins to rise will the flowers reopen. These movements are quite rapid too. Flowers will close completely within 6 - 10 minutes of a rapid decease in temperature. The reverse takes a bit longer, with most flowers needing 25 - 40 minutes to reopen.

Oxeye Daisy

Oxeye daisy (Chrysanthemum leucanthemum) is a pretty little perennial flower that might remind you of Shasta daisies, with a central yellow eye surrounded by 20 to 30 white petals. However, don't let this similarity fool you. This plant can quickly invade areas of the landscape, making it necessary for some oxeye daisy control measures.

Flower heads are mostly solitary on long peduncles (stems). Flower heads are 1-2 cm wide and have white ray florets and yellow disk florets. Involucral bracts are, uneven, in 2-4 rows, and green with brown scarious margins. The flower head's receptacle is nearly flat and naked (lacks awns, scales or bristles between the disk florets/achenes). The 15-35 ray florets have white petals of 1-2 cm and are fertile. The numerous disk florets have yellow petals, lack a pappus, are 2-3 mm tall, and have flattened style branches.

Oxeye Daisy Perennials. The plant spreads aggressively by producing seeds and underground through spreading rhizomes, eventually finding its way into unwanted areas such as crop fields, pastures, and lawns. The average plant produces 1,300 to 4,000 seeds annually and a particularly vigorous plant can produce as many as 26,000 seeds that germinate rapidly when they land on bare soil.

The Scots, who called them "gools," made the unfortunate farmer whose wheat fields had the most oxeye daisies pay an extra tax. Even so, the weed spread throughout the European continent and eventually found its way to the U.S., probably in bags of forage grass and legume seeds. It now grows in every state in the U.S.

Wild Chamomile

Chamomile is definitely one of the most popular wild medicinal plants that can be eaten. The two main types are the more popular German chamomile and the lesser known Roman chamomile (Chamaemelum nobile). Although they belong to different species, they are used to treat the same health ailments in herbal pharmacy. Both are used to calm frayed nerves, help in soothing various stomach problems, reduce muscle spasms, and to treat several skin conditions. The German variety grows in many countries.

Distinguishing Features - Chamomile is an annual wild edible that is easily recognized by its tiny daisy-like flowers (measuring no more than 2.5 centimetres wide). For the German variety there is only one flower that grows on a solitary stem.

Chamomile flowers resemble daisy flowers, with white petals circling a cone-shaped yellow centre. Depending on conditions, these flowers bloom between May and October. It has medicinal benefits and vitamin/mineral content of Chamomile. German chamomile leaves are fern-like light green and feathery whereas the Roman variety has finely divided parsley-like leaves that are thicker and flatter than their German equivalents.

Height - Chamomile, depending on conditions, can grow to anywhere from 60 centimetres to 1 metre tall.

The leaves and flowers are both edible but they differ in taste (the flowers have a slight apple taste). Both can be tossed into a salad or a mug to make a fresh herbal tea.

Boulder Raspberry

Rubus deliciosus, the delicious raspberry, boulder raspberry, Rocky Mountain raspberry or snowy bramble, is a North American species of flowering plant in the rose family, native to the United States, in the Rocky Mountains in Colorado, New Mexico, the Oklahoma Panhandle, and Wyoming.

Boulder raspberry is a native shrub grown for its large white flowers. Naturally occuring in the mountains and foothills along Colorado's Front Range, it has an arching, vase-shaped growth habit with thornless branches. In May and June, it produces large white single flowers. Later, small raspberry-like fruit appear, but are grainy and inedible. Birds like to eat the fruit.

Delicious raspberry is certainly a lovely deciduous shrub with its bright green leaves and large white flowers. However, it is curiously named for a plant with fruit that tends to be fairly dry, with lots of seeds and little flesh, even if the flavor is nice. It has a relatively small geographic range, centered in Colorado and barely extending into the southern-most part of Wyoming and the northern-most part of New Mexico, as well as barely entering the panhandle of Oklahoma. Edwin James first collected it for western science at the mouth of Boulder Canyon, in Colorado, during his work as botanist, geologist, and surgeon for the Long Expedition in 1820.

Unlike so many different species of raspberry, this one has no thorns. It normally reaches about four to five feet in height, but occasionally reaches nearly nine feet. It has good potential for use in landscaping in the right environments. It grows on rocky slopes and swales in the foothills of the Rocky Mountains, often mixed with other shrubs.

Tufted Evening Primrose

Tufted Evening Primrose, Gumbo Evening Primrose, Gumbo Lily, Fragrant Evening Primrose. Rosettes of oblong leaves with pointed tips subtend tufted evening-primrose's 4-6 in. flower stalks. Each large, white flower has four, heart-shaped petals and eight yellow stamens. The flowers open in late afternoon, close the next morning, and wither to pink or red-violet. Lateral roots may give rise to new perennial plants.

Tufted Evening-primrose is a member of the evening-primrose family (family Onagraceae), which includes mainly herbs, rarely shrubs or trees with often showy flowers. "Primrose" ultimately derives from a Latin word meaning "first" and the true primroses (Primulaceae), unrelated to evening-primroses, are among the first flowers to bloom in the spring. Apparently in the early 1600s when an eastern United States species of Oenothera was being described, its sweet scent reminded the botanist of wild primroses of Europe. He gave the name to those plants and it stuck.

As the name implies, this family has many species that bloom in the evening, the flowers stay open all night, and then wilt the next day. The flowers are usually white or bright yellow and attract large night-flying insects like hawk moths (family Sphingidae). In the evening-primrose family, the flowers often have a long floral tube that holds the petals well above the base of the flower. Nectar collects in the base of the tube so only long-tongued visitors can get a nectar reward. Again, hawk moths with their long coiled tongues are perfectly adapted to reach the nectar in evening-primrose flowers.

The leaves of the evening primrose can be used from April to June when the plant is not flowering yet. They can be eaten raw in salads or cooked like spinach or in soups. Several Native American tribes made tea from the evening primrose leaves and used it as a dietary aid.

White Water Lily

Nymphaea odorata, also known as the American white waterlily, fragrant water-lily, beaver root, fragrant white water lily, white water lily, sweet-scented white water lily, and sweet-scented water lily, is an aquatic plant belonging to the genus Nymphaea. It can commonly be found in shallow lakes, ponds, and permanent slow moving waters throughout North America where it ranges from Central America to northern Canada. It is also reported from Brazil and Guyana.

This plant is rooted from a branched rhizomes which gives rise to long petioles which terminate in smooth floating leaves. Since the leaves are subject to tearing by water and waves, they are round with a waxy upper coating that is water-repellent. The flowers also float. They are radially symmetric with prominent yellow stamens and many white petals. The flowers open each day and close again each night and are very fragrant. Once the flowers are pollinated, the developing fruit is pulled back under water for maturation.

Plant systematists often use it as a typical member of Nymphaeaceae, which (other than Amborella) is the most basal of the flowering plants.It is cultivated in aquatic gardens as an ornamental plant.

The fragrant water-lily has both medicinal and edible parts. The seeds, leaves, flowers and rhizomes can all be eaten. The rhizomes were also used by Native Americans to treat coughs and colds. The stem could be used to treat tooth aches if placed directly on the tooth. The muck-submerged stems are eaten by muskrats.

Giant Evening Star

(Mentzelia decapetala) Tenpetal blazingstar, evening-star, evening starflower, candleflower, gumbo lily, chalk lily. A native, drought-tolerant wildflower found in Utah and the central states. It has a spectacular display of large, yellow-centered, creamy-white flowers that resemble cactus flowers. Through the summer they open their flowers in the evening and close before morning. They can also open in overcast weather and attract many nighttime pollinators like moths and possibly pollinating bat species in the desert Southwest. We saw bees trying to get at the still closed flowers around dusk on many occasions. The flowers smell like honey! Makes a great moon garden plant alongside sacred datura and evening primrose.

Tenpetal blazingstar is a biennial to short-lived perennial wildflower with a long taproot and it can be found growing in dry areas, quick draining soils and slopes on harsh, full sun, exposures like road cuts and skree slopes and can be surprisingly lush looking for its harsh environs. The plants can grow to a few feet in height and width and have interesting toothed leaves with a rough texture.

The plants tolerate consistent watering as long as they have some drainage and a chance to dry out a bit and enough sun. Direct seeding in the fall or early spring is best so the plants can develop their long taproots, but they can be started in flats or pots as long as you plant them out before they stunt themselves in small containers. Cold stratification aids in germination. Drought-tolerant! Night-evening blooming! Pollinators!

These plants accumulate selenium and can be mildly poisonous. Forage Value: Livestock rarely eat ten-petal mentzelia but birds will consume the seeds.

American Bistort

American bistort grows from a short rhizome with 1 to several erect flowering stems, growing 10 to 28 inches tall. It has a woody twisted rootstock, often with a swollen cormlike crown. Flowers appear mostly in July and August. Dense white or pale pink flowers clusters at the top of slender stems. Flowers are in spike-like terminal racemes with many flowers. The spike is 1 ½ - 2 inches long and ½ - 1 inch wide. The perianth is long, divided most of its length into 5 oblong, equal, white to pink segments. There are 8 stamens on long filaments which protrude from the flower.

Fruits/Seeds: Achene with three sharp angles, yellowish-brown, smooth and shining, about 1/8 inch long. Leaves: Mostly basal, with long petioles. The blade is elliptic to lance shaped. Leaves have brownish stipules, 3-6 cm long. There are few small stem leaves that are sessile with a somewhat heart-shaped base. Stems: Slender, erect, reddish stems, which do not branch.

American bistort is one of the most common species found in mountain meadows throughout the West. Its most common habitats are wet meadows, swamps, around seeps, in moist openings in the timber and in high, moist mountain parks. It is found at elevations from 2,000 feet to 13,000 feet. In many localities it grows only as scattered individuals and does not make up an appreciable part of the plant cover, but in some restricted meadow and park areas it occurs in great abundance, occasionally being one of the dominant plants.

American bistort is eaten by both livestock and wildlife. The palatability varies in different localities, being regarded as worthless in some areas, and highly used in others. Roots were used in soups and stews by the **Blackfoot**, boiled with meat by the **Cherokee**, and used in a poultice that was applied to sores and boils by the **Miwok**.

Pearly Everlasting

One of the key characteristics of members of the sunflower family (Asteraceae or Compositae) is the presence of an involucre of modified leaves or bracts that surrounds the petal-like ray and tubular disk flowers within a flower head. Although there is great variation among composites in the type and number of flowers within a head, all composites have an involucre. Usually, the bracts are green and leaf-like, but in one group (or "tribe" as subgroups of the Asteraceae are called), the Inuleae, the bracts are white and membranous or woolly rather than green and leafy. Species in the Inuleae tribe include the pussytoes (Antennaria), cudweeds (Gnaphalium and Pseudognaphalium), and everlastings (Anaphalis). Over 100 species of Anaphalis are recognized in India, south Asia, and Europe, but only one (A. margaritacea) occurs naturally in North America. Our species is commonly called pearly everlasting for the pearl-white involucre bracts that surround the yellow disk flowers and superficially resemble rays. These bracts remain fresh in appearance long after the central disk flowers have wilted, making them well suited for dried flower arrangements.

Pearly everlasting is a tall, herbaceous perennial wildflower with stems up to three feet tall. The leaves are long and slender with green surfaces and densely white-woolly undersides (matching the cottony stems). The flowers often have a slightly musky odor. Native Americans often utilized odoriferous plants for medicinal purposes and pearly everlasting was no exception. Common uses for this species included poultices for treatment of sores, boiling in tea or a steam bath for rheumatism, or smoked to treat colds. The plant was also among many native species used as a tobacco substitute. Indian tribes had many opportunities to use pearly everlasting, as the species occurs commonly in dry, stony, or clay-rich soils of mountain meadows, prairies, and fallow fields across most of North America except the southeastern United States.

Alpine Yarrow

Achillea millefolium L. (yarrow) is a perennial herb, native to Europe and Asia and growing wild at different environmental conditions (altitude, soil). Since ancient ages, yarrow leaves and flowers have been used as medicinals, in cosmetics, and food industries. Plant height, number of inflorescences, fresh biomass and essential oil content, yield and composition of Achillea millefolium L. grown at different altitudes (from 250 m to 1,100 m).

Plants are multicellular, photosynthesizing eucaryotes. Most species occupy terrestrial environments, but they also occur in freshwater and saltwater aquatic environments. The oldest known land plants in the fossil record are Ordovician to Silurian. Land plant body fossils are known in Silurian sedimentary rocks - they are small and simple plants (e.g., Cooksonia). Fossil root traces in paleosol horizons are known in the Ordovician. During the Devonian, the first trees and forests appeared. Earth's initial forestation event occurred during the Middle to Late Paleozoic. Earth's continents have been partly to mostly covered with forests ever since the Late Devonian. Occasional mass extinction events temporarily removed much of Earth's plant ecosystems - this occurred at the Permian-Triassic boundary (251 million years ago) and the Cretaceous-Tertiary boundary (65 million years ago).

The most conspicuous group of living plants is the angiosperms, the flowering plants. They first unambiguously appeared in the fossil record during the Cretaceous. They quickly dominated Earth's terrestrial ecosystems, and have dominated ever since. Classification: Plantae, Angiospermophyta, Asterales, Asteraceae/Compositae. Locality: Rainbow Curve, Rocky Mountains National Park, northern Colorado, USA.

Caraway

Caraway, also known as meridian fennel and Persian cumin (Carum carvi), is a biennial plant in the family Apiaceae, native to western Asia, Europe, and North Africa. The plant is similar in appearance to other members of the carrot family, with finely divided, feathery leaves with thread-like divisions, growing on 20–30 cm (8–12 in) stems. The main flower stem is 40–60 cm (16–24 in) tall, with small white or pink flowers in umbels. Caraway fruits, commonly (erroneously) called seeds, are crescent-shaped achenes, around 2 mm (1⁄16 in) long, with five pale ridges.

The etymology of caraway is complex and poorly understood. Caraway has been called by many names in different regions, with names deriving from the Latin cuminum (cumin), the Greek karon (again, cumin), which was adapted into Latin as carum (now meaning caraway), and the Sanskrit karavi, sometimes translated as "caraway", but other times understood to mean "fennel".

The fruits, usually used whole, have a pungent, anise-like flavor and aroma that comes from essential oils, mostly carvone, limonene, and anethole. Caraway is used as a spice in breads, especially rye bread. In the United States, the most common use of caraway is whole as an addition to rye bread – often called seeded rye or Jewish rye bread, where the recipe itself owes to East Slavic coriander and caraway flavoured rye bread (see Borodinsky bread). Caraway fruits are frequently used in Irish soda bread, along with raisins and currants.

Caraway is also used in desserts, liquors, casseroles, and other foods. Its leaves can be added to salads, stews, and soups, and are sometimes consumed as herbs, either raw, dried, or cooked, similar to parsley. The root is consumed as a winter root vegetable in some places, similar to parsnips.

Common Yarrow

Achillea millefolium L. Common Yarrow, Western Yarrow, Yarrow, Milfoil. Yarrow grows to 3 feet tall and has no branches except near the top. The leaves are alternate, 3-5 inches long, with many leaflets on each side of the midrib (1-pinnately lobed); and these are further divided into smaller leaflets, giving them a delicate, fernlike, lacy appearance.

Flower heads are arranged in large, compact clusters at the top of the stem, each cluster consisting of 1 or more flower heads. The flower head has 20-25 yellowish-white (rarely pink) ray flowers and similarly colored disk flowers.

Achillea millefolium is highly variable and has been treated both as a single species with varieties and as multiple distinct species. A. millefolium is cosmopolitan throughout the Northern Hemisphere. In North America, A. millefolium is a complex of both native and introduced plants and their hybrids.

Use Ornamental: This is a good garden plant, as it can be used in fresh or dried arrangements and has a pleasing fragrance. Flat-topped clusters of small, whitish flowers grow at the top of a gray-green, leafy, usually hair, stem.

Use Medicinal: Yarrow was formerly used for medicinal purposes: to break a fever by increasing perspiration, to treat hemorrhaging and as a poultice for rashes. A tea used by Native Americans to cure stomach disorders was made by steeping the leaves.

Use Other: The foliage has a pleasant smell when crushed.

Bitter Cress

Cardamine hirsuta, commonly called hairy bittercress, is an annual or biennial species of plant in the family Brassicaceae, and is edible as a salad green. It is common in moist areas around the world. Depending on the climate C. hirsuta may complete two generations in a year, one in the spring and one in the fall; also depending on the climate, the seeds may germinate in the fall and the plants may remain green throughout the winter before flowering in the spring. It often grows a rosette of leaves at the base of the stem, while there may be leaves on the upright stem, most of the leaves will be part of the basal rosette. The leaves in this rosette are pinnately divided into 8–15 leaflets which have short stems connecting them to the petiole.

These basal leaves are often 3.5–15 cm long. The leaflets are round to ovate in shape and may have smooth or dentate edges. The leaflet at the tip of the leaf (terminal leaflet) will be larger than the other leaflets and round to reniform in shape. The cauline (attached to the upright stem) leaves are also pinnately divided, with fewer leaflets, and generally smaller than the basal leaves; these leaves will be borne on a petiole and are 1.2–5.5 cm long. The stems, petioles, and upper surfaces of the cauline leaves are sparsely hairy.

Other common or country names include lamb's cress, land cress, hoary bitter cress, spring cress, flick weed, and shot weed (or lambscress, landcress, hoary bittercress, springcress, flickweed, and shotweed. Hairy bittercress is very similar to Cardamine flexuosa. Some differences are that the stems are hairless and the leaves do not clasp the stems, as in C.flexuosa. It has only 4 stamens, C. flexuosa has 6 stamens, and the fruits overtop the flowers. In C. flexuosa the fruits do not overtop the younger flowers. The fruits grow in a thin pod arranged as a single row.

Alpine Thistle

There are many thistles, both native and introduced, in the area. All have spiny leaves. Flower heads have disk flowers only. Colors range from creamy white to yellow to lavender to purple, even in the same species. They are difficult to differentiate. Flora of North America explains the complexity. There are 20 native thistle species in Colorado. How do you tell a native thistle from a noxious thistle? Generally, if the stand of thistles is very dense or very tall (6ft), it is usually noxious. If you are above timberline and see a thistle, it's probably native. Native thistles tend to be short, often white, and are usually only found as individual plants or in very small groups of 2-4 plants.

Cirsium scopulorum. The Cirsium genus was named by Philip Miller (1691-1771). "Cirsium", is Greek for "dilated vein" from the bygone belief that a Thistle distillate opens clogged veins.

This very prickly native Thistle grows 20-60 inches tall at maturity. The plant usually has a very erect posture with narrow, often hairless, shiny leaves and tight clusters of very attractive flowers, often nodding.

This sparsely vegetated alpine association is known from the northern Front Range of Colorado between 3325 and 3660 m (10,900-12,000 feet) elevation. It likely has a wider distribution, but scree and boulderfields are poorly sampled. Stands occur on rocky scree slopes and boulderfields in the lower alpine. Stands are often found on lee slopes (easterly and southerly) where there is winter-long snow cover, but occur on all aspects, including north and western slopes, where sites are exposed to moderate to high winds that keep these areas generally snow-free during most of the winter. Sites are gentle or moderately steep to sometimes steep, stable scree slopes and boulderfields often found below steep, active slopes that generally lack vegetation. Bedrock outcrops may often be present to common.

Elegant Death Camas

Anticlea elegans, formerly Zigadenus elegans, is also known as mountain deathcamas, elegant camas or alkali grass. It is not a grass (though its leaves are grass-like), but belongs to the trillium family, Melanthiaceae.

It has white lily-like flowers and two-pronged, greenish-yellow glands on each petal (the shape of which can help in distinguishing it from other members of the genus). It is widely distributed throughout North America and occurs in many habitats. Plants on the western side of the continent tend to be smaller in size than their eastern counterparts, but have more densely clustered flowers. The plant is extremely poisonous.

Perennial wildflower blooms midsummer; basal grass-like leaves and green-white to yellow-white foul smelling flowers; moist sites, in high elevation forests, also meadows, and rocky slopes, grasslands, montane to alpine zone.

Don't let any part of this plant enter your body, IT WILL KILL YOU. The name is a telling clue. Many livestock animals alone, AND early western settlers, have been killed by ingesting this plant. The roots are easily mistaken for edible onions or lily bulbs. The poison is zygadenine and is more potent than strychnine. The plant is a perennial also called Mountain Death Camas. It can cause convulsions, coma, and then death.

Ingesting as little as one-half pound of plant per 100 pounds of body weight can produce thirst, headache, vomiting and loss of muscle control leading to heart failure, coma and death.

Colorado False Hellebore

Common names include: False-hellebore, Skunk cabbage, corn-lily. Botanic name: Veratrum californicam. American false hellebore (V. viride) is the most common and is found in most northern States from East to West including Canada. Others species include V. alblum. A plant of altitudes above 8000 feet preferring moist mountain valleys and meadows.

Over 50 complex alkaloids, many with potent hypotensive effects have been isolated from Veratrum species. Highest concentration of the alkaloids are found in the young plant in early spring. The roots and all parts of the plant are toxic. Experimentally it has been shown that 1.25mg/kg body weight of the root is lethal to sheep, while a dose of 0.88mg/kg body weight of ground root produce craniofacial malformations in the lambs without causing severe toxicity in the ewe.

Erect, 1-2 meters tall, with short perennial root stalks. The leaves are smooth, alternate, parallel-veined, broadly oval to lanceolate, 12-30 cm long, 12 cm wide, in three ranks and sheathed at the base. The inflorescence is a panicle of very numerous, small, greenish-white flowers, the lower ones often staminate and the upper ones perfect. The fruit is 3-chambered with several seeds. Veratrum californicum has whitish flowers on an erect panicle. It is found at higher altitudes of the rocky Mountains. Veratrum viride is very similar, but has greenish-white flowers produced in a pannicle with drooping lower branches. It grows at lower altitudes throughout North America.

White Locoweed

Locoweed (also crazyweed and loco) is a common name in North America for any plant that produces swainsonine, a phytotoxin harmful to livestock. Worldwide, swainsonine is produced by a small number of species, most in three genera of the flowering plant family Fabaceae: Oxytropis and Astragalus in North America, and Swainsona in Australia. The term locoweed usually refers only to the North American species of Oxytropis and Astragalus, but this article includes the other species as well. Some references may list Datura stramonium as locoweed.

Locoweed is relatively palatable to livestock, and some individual animals will seek it out. Livestock poisoned by chronic ingestion of large amounts of swainsonine develop a medical condition known as locoism (also swainsonine disease, swainsonine toxicosis, locoweed disease, and loco disease; North America) and pea struck (Australia). Locoism is reported most often in cattle, sheep, and horses, but has been reported also in elk and deer. It is the most widespread poisonous plant problem in the western United States.

Most of the 2000 species of Astragalus, including many that are commonly known as locoweeds, do not produce swainsonine. Some species, including a few that produce swainsonine, accumulate selenium. This has led to confusion between swainsonine poisoning and selenium poisoning due to this genus.

Poison Hemlock

Poison hemlock, a Class B noxious weed, is a widespread toxic biennial plant in the Carrot Family often found in open sunny areas, fields, vacant lots, and on roadsides. Eating even a small amount of any part of this plant can kill people, livestock, and wildlife.

Identification and Look-Alikes: Poison-hemlock stems have reddish or purple spots and streaks, are not hairy, and are hollow. Leaves are bright green, fern-like, finely divided, toothed on edges and have a strong musty odor when crushed. Flowers are tiny, white and arranged in small, umbrella-shaped clusters on ends of branched stems.

Poison-hemlock is a biennial and germinates throughout the year. First year plants are low-growing and may overwinter in mild climates. Young poison-hemlock plants somewhat resemble carrot plants, but can be distinguished by the lack of hairs on the stems and the purple-reddish blotches on the stems.

In late spring, second-year plants reach 6-10 feet tall and produce numerous umbrella-shaped clusters of tiny, white, 5-petaled flowers. Flowering poison-hemlock may be confused with wild carrot (Daucus carota, or Queen Anne's Lace). In contrast with poison-hemlock, wild carrot has one densely packed umbrella-shaped flower cluster on a narrow, hairy stem, usually with one purple flower in the center of the flower cluster, and is usually 3 feet tall or less. Wild carrot also flowers later in the summer.

Poison-hemlock is acutely toxic to people and animals, with symptoms appearing 20 minutes to three hours after ingestion. All parts of the plant are poisonous and even the dead canes remain toxic for up to three years. The amount of toxin varies and tends to be higher in sunny areas. Eating the plant is the main danger, but it is also toxic to the skin and respiratory system.

White Lovage

Lovage, Levisticum officinale, is a tall perennial plant, the sole species in the genus Levisticum in the family Apiaceae, subfamily Apioideae. It has been long cultivated in Europe, the leaves being used as a herb, the roots as a vegetable, and the seeds as a spice, especially in southern European cuisine.

Lovage is an erect, herbaceous, perennial plant growing to 1.8–2.5 m (6–8 ft) tall, with a basal rosette of leaves and stems with further leaves, the flowers being produced in umbels at the top of the stems. The stems and leaves are shiny glabrous green to yellow-green and smell somewhat similar to celery when crushed. The larger basal leaves are up to 70 cm (28 in) long, tripinnate, with broad triangular to rhomboidal, acutely pointed leaflets with a few marginal teeth; the stem leaves are smaller, and less divided with few leaflets. The flowers are yellow to greenish-yellow, 2–3 mm (1⁄16–1⁄8 in) diameter, produced in globose umbels up to 10–15 cm (4–6 in) diameter; flowering is in late spring. The fruit is a dry two-parted schizocarp 4–7 mm (3⁄16–1⁄4 in) long, mature in autumn.

The leaves can be used in salads, or to make soup or season broths, and the roots can be eaten as a vegetable or grated for use in salads. Its flavor and smell can be described as a mix of celery and parsley, but with a higher intensity of both of those flavors. The seeds can be used as a spice, similar to fennel seeds. In the Netherlands, lovage leaves are traditionally cooked with white asparagus and salt; and served with boiled eggs. In Romania, the leaves are a preferred seasoning for the various local broths, equally as much as parsley or dill. In the UK, an alcoholic lovage cordial is traditionally added to brandy as a winter drink and is or was popular in Cornwall where it was originally added to slightly spoiled smuggled brandy to hide the taste of salt.

White Clematis

Names: This species is also known as Western White Virgin's Bower, Creek Clematis, Creekside Virgin's Bower, Deciduous Traveler's-joy, Old-man's Beard, Pipestems, Peppervine, or Yerba de Chiva (Goatbeard plant). "Klema" comes from a Greek word meaning twig or branch. Ligusticifolia refers to its Lovage or Licorice-leaf (Ligusticum)-like leaves.

Relationships: There are about 300 species of Clematis, mostly found in temperate regions of the northern hemisphere; most are climbing vines; with about 30 native to North America; and 5-7 species in the Pacific states. Many species and cultivated varieties are grown for their attractive flowers; some have escaped cultivation.

Distribution: Western White Clematis is found throughout much of western North America. In southern British Columbia and Washington it is mostly an eastside species, but it can be found on the west side in a couple of southern Washington counties and in Oregon. It is found throughout much of California into northwest Mexico.

Growth: Western White Clematis is a climbing vine with stems often to 18 feet (6m), but they may climb up to 60 feet (20 m).

Diagnostic Characters: Opposite leaves are pinnately compound with 5-7 leaflets. Leaflets are coarsely toothed, sometimes lobed or entire; the petioles persist, acting like tendrils. Clusters of white flowers arise from the leaf axils; male and female flowers on separate plants. Flowers lack petals but have four showy sepals. Female flowers have numerous sterile stamens. Fruit are silky, feathery achenes in clusters that are likened to an "old man's beard" or a goat's beard.

Miner’s Candle

Miner's Candle is a slender annual herb with simple or branched stems that are 5-15 cm high. The alternate, narrow, strap-shaped leaves are 2-4 cm long; those at the base are usually brown by the time the plant is fruiting. Stems are sparsely covered with straight hairs appressed to the surface, while the leaves have some spreading hairs. Tiny, white flowers are borne on coiled stalks that unwind and elongate as flowering progresses from the base upward. The corolla is ca. 1 mm high and has a small united portion below and 5 spreading petals above. The narrow calyx is covered with bristly hairs and becomes 4-6 mm long in fruit. The 4 lance-shaped nutlets are ca. 2 mm long, ca 0.5 mm wide, and are finely bumpy.

Flowering occurs in June, however mature nutlets are necessary for positive identification.

The many similar-appearing, small-flowered, annual members of the genus Cryptantha are best distinguished by the ornamentation of the mature nutlets. Cryptantha scoparia has narrowly lance-shaped nutlets that are less than 7 mm wide, with tiny hooked prickles. This combination of characters is diagnostic.

The species is an annual, and population sizes may vary greatly from year to year. Plants are usually found where vegetation is relatively sparse. The small size of the flowers and the regularity of fruiting suggest that C. scoparia is self-pollinated. This species' habitat is subject to grazing, although the effects are unknown. Populations could be vulnerable to invasive weeds, which can be spread by livestock. However, livestock may also spread the seeds of C. scoparia and help create open habitat required for seedling establishment.

Alpine Forget-Me-Not

Alpine forget-me-not (Myosotis asiatica; synonyms: Myosotis alpestris, Myosotis alpestris ssp. asiatica, Myosotis sylvatica var. alpestris) is a native perennial to the north-western states and provinces of the United States and Canada. It was designated the state flower of Alaska in 1949 and thought to represent perseverance; a quality which characterized Alaska's first pioneers. Usually located in moist mountainous areas on wooded slopes and grassy meadows, it is restricted to elevations in subalpine and alpine environments, between 7,500 to 10,000 feet. As a limiting factor to most high-altitude plants, its growing season is short; generating flowers and setting fruit must occur between June and September.

A weak slender stem supports a terminal cluster of tiny bright blue flowers which are no wider than 6mm. The five flower petals are fused into a narrow tube, which then flatten into a face of five rounded lobes. The deep blue petals are contrasted with a bright-yellow center, which give forget-me-nots their special attractive appearance. The flower spikes often uncurl like a scorpion tail with the youngest flowers blooming on the upper surface towards the terminal end.

Used for its therapeutic properties, forget-me-nots can be used as an astringent in poultices for wounds to tighten tissues. Some contain volatile oils which have been claimed to serve as a diaphoretic to induce sweat and act as an antidote for various poisons.

Blue Columbine

Aquilegia coerulea is a species of flowering plant in the buttercup family Ranunculaceae, native to the Rocky Mountains from Montana south to New Mexico and west to Idaho and Arizona. Its common name is Colorado blue columbine; sometimes it is called "Rocky Mountain columbine," but this also refers to Aquilegia saximontana.

The Latin specific name coerulea (or caerulea) means "sky blue".

It is a herbaceous perennial plant often found at elevations of 2,100 to 3,700 m (6,900 to 12,100 ft). This beautiful plant can grow to 20–60 cm (8–24 in) tall, with flowers sprouting in inflorescences produced from the shoot apical meristem. The flowers are very variable in color, from pale blue (as in the species name coerulea) to white, pale yellow and pinkish; very commonly the flowers are bicolored, with the sepals a different shade to the petals.

They consist of five petals, five sepals and an ovary surrounded by 50 to 130 stamens. Five long spurs hang below the calyx and contain nectar at their tips, accessible only to hawkmoths. In addition to hawkmoths, pollinators for this flower include bumble-bees, solitary bees and syphrid flies. Aquilegia coerulea is the state flower of Colorado.

Aquilegia coerulea is used as an ornamental plant in gardens, and has gained the Royal Horticultural Society's Award of Garden Merit. Numerous cultivars selected for different flower colors. Cultivars include 'Origami' and 'Crimson Star'.

Bird Bill

Birdbill dayflower is in the spiderwort family (Commelinaceae), which has about 40 genera and 600 species worldwide, mostly in the tropics. The two most common genera in North America are Commelina (the dayflowers) and Tradescantia (the spiderworts).

There are nine species of dayflower in the continental United States, four of which are native and the other five introduced. Whitemouth dayflower (Commelina erecta), climbing dayflower (Commelina diffusa), and Virginia dayflower (Commelina virginica) are common native species found mostly in the eastern half of the United States. Asiatic dayflower (Commelina communis) is a common introduced species found in the eastern half of the United States and the Pacific Northwest. Birdbill dayflower grows in Arizona, New Mexico, southern Colorado, and trans-Pecos Texas.

The flowers of all dayflowers emerge from a folded leaf-like structure called a bract. In birdbill dayflower, the bract has a long tapered tip. The flowers of all dayflowers are blue, often a lovely pastel. Birdbill dayflower has three petals, but several of the very common species have only two.

The flowers are open in the morning, but wither by mid-day. Actually, the petals absorb moisture from the atmosphere and turn to mush, a phenomenon called deliquescence. Birdbill dayflower grows in rocky soils in woodland and forest openings. While many of the dayflowers grow in wet soils, birdbill dayflower grows on relatively dry well drained slopes. Plants thrive with the onset of summer rains.

Bush morning Glory

The bush morning glory plant (Convolvulus cneorum) is a beautiful, silvery foliaged shrub that comes from the Mediterranean region of Europe. It has a neat, dense round shape and grows 2 to 4′ tall by 2 to 4′ wide (61 cm. to 1.2 m.). This evergreen plant is also quite hardy but it can be damaged by temperatures below 15°F. (-9 C). Its funnel-shaped, showy, three-inch (7.6 cm.) flowers are white with a pink tint. Bees and other nectar loving critters are drawn to these flowers. The bush morning glory plant is drought tolerant, although it does need some additional water in the desert. It requires very good drainage and lean soil, as it is susceptible to root rot and other fungal diseases. Fertilizing and overwatering this plant leads to feeble, floppy stems.

The bush morning glory performs best in the sun. It can also survive in shady conditions but will form a looser, sprawling shape and its flowers will only partially open. The bush morning glory is not weedy, so it won't take over your garden like some other morning glories. It is fairly deer resistant and is only occasionally bothered by deer.

This plant is also referred to as Man-root due to its ability to grow a root system that is allegedly the size of a man (it's more like a small child). Because of this large root system, the plant is very drought-tolerant.

The plant's toughness is made possible in part by tiny hairs that cover the grey leaves and give the shrub an overall silvery sheen. This lustrous foliage, combined with the large, showy white flowers that appear in spring and continue through summer, is especially breathtaking in moonlight. Bush Morning Glory is outstanding in containers and rock gardens, and can help soften the areas between larger, drought tolerant accents such as Agave and Yucca.

Fringed Gentian

Gentianopsis crinita (Fringed Gentian) matures to just 12" and has bright blue to purple flowers. Fringed Gentian prefers wetter soil conditions, and grows best in full sun. Most Gentians bloom late: August, September, and October.

Other names in use are: Small Fringed Gentian and Gentiana crinita.

This plant is now rare due to habitat loss. As with all threatened native plants, Fringed Gentian should never be picked or transplanted! The flowers open on sunny days, but generally remain closed on cloudy days. Individual plants live for only one or two years, but do reseed when given the proper conditions. Ants are highly attracted to Gentianopsis crinita because they like the taste and crave the nutrition of the nectar, so in response, some specialists believe the fringe on the petals provides a measure of protection.

The flowers have an unearthly beauty that is positively stunning; Fringed Gentian ranks among the most attractive of all wildflowers. Another similar species in this genus is Gentianopsis procera (Lesser Fringed Gentian). This latter species is a petite version of Fringed Gentian: it is usually shorter with smaller flowers and leaves. The flowers of Lesser Fringed Gentian have corolla lobes that are less deeply fringed, and its leaves are more narrow (becoming linear-lanceolate to nearly linear underneath the flowers).

Lesser Fringed Gentian is even less common than Fringed Gentian, preferring similar to slightly wetter habitats. Another common name of Gentianopsis crinita is Greater Fringed Gentian; a scientific synonym of this species is Gentiana crinita.

Nelson's Larkspur

In the early spring, lovely violet-blue Delphinium nuttallianum appears in solitary patches in open woods and also in massive arrays in meadows. The plant is found from about 7,000' to 9,500' in elevation.

Delphinium nuttallianum produces several deeply dissected basal leaves early in the spring and then puts up a 6-to-12 inch flower stalk with several more dissected leaves. By the time the flowers are fully opened, as in the photograph at left, the basal leaves are usually withered. The lower arrows point to the dried, buff-colored leaves at the bottom of the stalk. The two upper arrows point to the green star-burst shaped, three-chambered seed pods ("follicles"). Each follicle will split ("dehisce") along one side and spill the numerous seeds.

The common name, "Larkspur", comes from the similarity of the spur on the rear of the flower to a Lark's foot structure.

Linnaeus named this genus in 1753. "Delphinium" is from the Latin "delphinus", "Dolphin", for the resemblance of the flower buds to Dolphins. (Click to see the Dolphins.) Thomas Nuttall, Harvard teacher and one of the most highly praised 19th century botanists and explorers, collected this species in 1834 near the Columbia River and in 1843 Pritzel named this species for Nuttall. (More biographical information about Nuttall.) Edward Greene named and described this plant in 1896 from a specimen collected in 1894 in Wyoming by Aven Nelson, the great University of Wyoming botanist. It was later realized that Nelson's plant was the same as the one discovered by Nuttall 60 years earlier and, therefore, the name "Delphinium nelsonii", was ruled illegitimate.

Sky Pilot

Polemonium eximium, the skypilot or showy sky pilot, is a perennial plant in the phlox family (Polemoniaceae) that grows at high altitudes (mostly above 10,000 feet (3,000 m). It is endemic to the Sierra Nevada in California where it grows in the talus of the high mountain slopes. Wildflower enthusiasts consider it to be among the best of the Sierra wildflowers, and highly rewarding to find.

It mostly occurs at elevations from 10,000 to 14,000 feet (3,000 to 4,300 m) in the Central and Southern Sierra Nevada. It mostly occurs in colonies in stark surroundings, above 10,000 feet (3,000 m), in rocky areas that appear mostly devoid of soil, and rarely in association with other plants.

Most notably, it can be found at the upper reaches of Mt. Whitney, both via the main trail and mountaineer's route, as well as the southern flanks of Mt Langley in the Inyo National Forest. Additionally, it resides near the summit of Mount Dana in Yosemite National Park.

It is a sticky, aromatic smelling, 4 to 16 inches (10 to 41 cm) tall perennial plant with a woody base, from which grows clumps of erect stems. Basal leaves are glandular-hairy, 4–13 centimetres (1.6–5.1 in) long, and 4–9 centimetres (1.6–3.5 in) wide, each made up of 20-35 leaflets, which in turn are subdivided into 3–5 lobes.

One-Sided Beardtongue

Individual flower is about ½ inch wide and somewhat longer, formed of a bell-shaped, lavender-blue corolla which flares at its mouth into 5 lobes separated into two groups.

Numerous flowers, in groups of 3 or more, are closely arranged along one side of the top half of each stem, several stems rising from a root crown. Plant is 2 feet or more tall, with narrow tapering leaves, opposite each other in pairs. Grows in foothills and montane zones. Blooms late June-July.

This is but one of twenty or more species of Penstemon found in Colorado. Some, such as Penstemon angustifolius, with its azure blue flowers, grow on the plains. A few are dwarf species of the sub-alpine zone such as Penstemon harbourii. Every zone and every section has its quota, and they range in color through all shades of lavender, blue, purple, and even red. In details of flower structure, as well as in size, they vary considerably.

All of them, however, have a tubular corolla of some shape, terminating in five lobes, divided into two groups, giving them a two-lipped appearance. From this their relationship to garden snapdragons is apparent. In the penstemons, also, the topmost of their five stamens is sterile and often tipped with a little brush of hairs. This gives them the name of beardstongue.

The flowers are pinkish-lavender to deep purple with a beautiful gradient no graphic software can match.

Silvery Lupine

As do all lupines, silvery lupine has palmately compound leaves with six to nine leaflets that join together at a common point. The silky-haired leaves are opposite on the stem and at times have a silvery Lupinus argenteus. Argenteus is from a Greek word for silver. The plants are from six to 24 inches high with one to several stems that are often branched. The flowers have the typical look of pea flowers, with a banner, two wings and a keel. The banner petal usually has a white spot on it that serves as a signal for pollinators, often bees.

As the flower ages the spot turns a reddish color and bees have learned to skip these flowers as the nectar reward will be limited. This helps the bees by directing them to flowers with fresh and ample nectar, and helps the plant by keeping old pollen out of circulation. The flower racemes are usually four to six inches high with numerous individual flowers around the flowering stem. The flowers can be white or nearly white with a bluish tinge, to light or dark blue. Lewis evidently collected a whitish colored individual. The pods that form after flowering is complete hold two to five pinkish-gray to light brown seeds.

Silvery lupine is found in grasslands, ponderosa pine woodlands, on rocky prairie hillsides and on subalpine ridges. The species is distributed from east-central Oregon to northern California and east to South Dakota and the Rocky Mountain states to New Mexico. It is common in the Great Basin and Great Plains but is rare in Saskatchewan and Kansas. It can be found today on Lewis & Clark Pass where Lewis collected it in 1806.

Parry's Bellflower

Fibrous-rooted with a slender-branched crown. Stems slender, ascending to erect, simple, 5–30 cm. Herbage glabrous; leaves with ciliate petiole bases, margins scabrous. Basal leaves petiolate; blades oblanceolate, entire, 1–2 cm long. Stem leaves narrower, longer, becoming sessile. Inflorescence a solitary, terminal flower. Flowers: hypanthium glabrous to puberulent; sepals linear-lanceolate, 3–8 mm long, erect; corolla campanulate, 9–15 mm long; style shorter than corolla; stigmas 3(to 5). Capsule erect, 7–11 mm long.

Habitat of the herb: Moist sub-alpine meadows and other open places in mountains, 2100 - 3000 metres. Edible parts of Parry's Bellflower: Leaves - raw or cooked. Other uses of the herb: The chewed blossoms are depilatory.

Propagation of Parry's Bellflower: Seed - surface sow spring in a cold frame. The seed usually germinates in 2 - 4 weeks at 18C. When they are large enough to handle, prick the seedlings out into individual pots and grow them on in a cold frame for at least their first winter. Plant them out into their permanent positions in late spring or early summer, after the last expected frosts. Basal cuttings in spring. Harvest the shoots when they are about 10 - 15cm long with plenty of underground stem. Pot them up into individual pots and keep them in light shade in a cold frame or greenhouse until they are rooting well. Plant them out in the summer. Division in spring or autumn. Difficult, because the long runners do not take kindly to separation from the parent plant and are difficult to establish. Cultivation of the herb: Moist sub-alpine meadows and other open places in mountains, 2100 - 3000 metres.

It is used medicinally by the Zuni people. The blossoms are chewed, and the saliva is applied to the skin as a depilatory. A poultice of chewed root is also applied to bruises. The plant has been taken by pregnant women who desired a female child. The dried plant has been used as a dusting powder to treat sores. The chewed blossoms have been applied to the skin as a depilatory.

Tall Fringed Bluebell

Mertensia ciliata is a species of flowering plant in the borage family known by the common names tall fringed bluebells, mountain bluebells, and streamside bluebells. It is native to the western United States, in California, Nevada, Utah, and Oregon. It often grows in moist habitat, such as subalpine meadows and creeksides. It often carpets large areas of meadow and hillside with blue-green foliage and sweet-scented bluebell blooms. Mertensia ciliata is a perennial herb producing a cluster of erect stems from a thick, branching caudex. The leafy stems reach well over a meter in maximum height.

The veiny leaves are oval to lance-shaped and pointed. The inflorescence is an open array of many clustered blue bell-shaped flowers each between 1 and 2 centimeters long. The hanging, fragrant flower is tubular, expanding into a wider, lobed mouth. The flowers and leaves are edible. Mertensia ciliata is a perennial herb producing a cluster of erect stems from a thick, branching caudex. The leafy stems reach well over a meter in maximum height. The veiny leaves are oval to lance-shaped and pointed. The inflorescence is an open array of many clustered blue bell-shaped flowers each between 1 and 2 centimeters long. The hanging, fragrant flower is tubular, expanding into a wider, lobed mouth. The flowers and leaves are edible.

Mountain bluebells is palatable to all livestock but is especially relished by both sheep and goats. The flowers of mountain bluebells are edible raw. The leaves are edible raw or cooked. The plant is galactogogue, and a tea of the plant was used by the **Cheyenne** Indians to increase the milk flow of nursing mothers. They also made a tea of the powdered root and used it to relieve the itching caused by smallpox and measles.

Prairie Bluebell

Mertensia lanceolata, known as prairie bluebells, narrow-leaved languid lady, lance-leaved bluebells, and lance-leaved lungwort is a species of flowering plant native to western North America. A herbaceous perennial, it has blue-green leaves alternately arranged on its smooth flowering stalk. Its flower buds are pink-purple and become more blue as they open.

Mertensia lanceolata is a variable species with flowering individuals typically growing 20-35 cm in height. The species is found in Rocky Mountain habitats from the plains to alpine habitats. The leaves are blue-green due to the waxy coating with a prominent center vein. Immature plants will have a few distinctly lanceolate leaves arising from the ground on short stalks while plants mature enough to flower will typically have narrower leaves attached alternately attached to the flower stalk.

The leaves or flower stalks arise from the large taproot. Flowering stalks lean outwards at an angle with multiple flowers hanging downwards from the top of the stalk. The flowers are five fused petals forming a short trumpet.

Leafy bluebells may be found entirely east of the Cascades south to central Nevada and northern Utah (Wasatch and Bear River ranges), and east to the edge of the Great Plains (eastern edge of the Rocky Mts.) in northern Wyoming.

The bulbs of bluebells are used in folk medicine as a remedy for leucorrhoea, and as a diuretic or styptic, while the sap can be used as an adhesive. The bluebell may be regarded as the United Kingdom's "favourite flower".

Western Blue Flax

Linum lewisii, Wild Blue Flax, Prairie Flax, Lewis Flax, Lewis's Flax. Prairie flax grows 18-20 inches tall. It rarely stands straight up, but rather leans at an angle. Flowers are pale blue, with 5 petals about 1-1 1/2 inches across, veined in darker blue. Each stem produces several flowers, blooming from the bottom upward. The seeds are produced on the lower flowers while those above continue to bloom. The stem is leafy when the plant is young, gradually losing most of its leaves as it matures. Leaves are narrow and about 3/4 inch long.

Bloom Color: Blue , Purple. Bloom Time: Mar , Apr , May , Jun , Jul , Aug , Sep. Native Distribution: Roughly the western 3/4 of North America, from Alaska and subarctic Canada as far south as Durango and Nuevo Leon in northern Mexico. Native Habitat: Woodland, Prairie, Meadow, Field.

The sepals, petals, stigmas and stamens are in multiples of five. There are 10 seeds. Flowers close each evening and open again in the morning.

Water Use: Medium. Light Requirement: Sun. Soil Moisture: Dry. $CaCO_3$ Tolerance: High. Drought Tolerance: High. Soil Description: Sand.

Lewis flax has excellent cold winter and drought tolerance. It is usually found in open areas, but it will tolerate semi-shade. Plants are fire resistant due to the leaves and stems staying green with relatively high moisture contents during most of the fire season. It prefers dry, open places.

Benefits: Use Medicinal: Eyewash, Boils, poultice of fresh crushed leaves applied to irritated eyes, wash of tobacco and blue flax to improve hair.

Chickory

Common chicory (Cichorium intybus) is a somewhat woody, perennial herbaceous plant of the daisy family Asteraceae, usually with bright blue flowers, rarely white or pink. Many varieties are cultivated for salad leaves, chicons (blanched buds), or roots (var. sativum), which are baked, ground, and used as a coffee substitute and food additive. In the 21st century, inulin, an extract from chicory root, has been used in food manufacturing as a sweetener and source of dietary fiber.

Common chicory is also known as blue daisy, blue dandelion, blue sailors, blue weed, bunk, coffeeweed, cornflower, hendibeh, horseweed, ragged sailors, succory, wild bachelor's buttons, and wild endive.

Around 1970, it was found that the root contains up to 20% inulin, a polysaccharide similar to starch. Inulin is mainly found in the plant family Asteraceae as a storage carbohydrate (for example Jerusalem artichoke, dahlia, yacon, etc.). It is used as a sweetener in the food industry with a sweetening power 10% that of sucrose and is sometimes added to yogurts as a 'prebiotic'.

Fresh chicory root may contain between 13 and 23% inulin, by total weight

Chicory is grown as a forage crop for livestock. It lives as a wild plant on roadsides in its native Europe, and is now common in North America, China, and Australia, where it has become widely naturalized. "Chicory" is also the common name in the United States for curly endive (Cichorium endivia); these two closely related species are often confused.

Prairie Spiderwort

Prairie Spiderwort forms a low-growing patch of deep blue blooms in late spring to early summer. As with other spiderworts, the blooms are open in the morning until the sun gets hot, and then close to conserve energy—a process that results in an overall longer bloom period, and a great deal of morning pollinator activity.

This Spiderwort grows well in a variety of soils including hot dry spots where other plants may struggle. Long-lived, it forms attractive patches that spread easily by a rhizomatous root. Given the opportunity and the right conditions Prairie Spiderwort can spread aggressively, but it doesn't usually out-compete other taller, well established plants. Consider planting it along with some later-blooming prairie flowers and grasses nearby, as the late summer foliage tends to look a little worn.

Spiderwort had many uses in First Nation's culture as food and medicine. The seeds are edible when roasted and ground into a powder (although they are somewhat bitter to taste). Leaves can be made into a tea or tossed into salads, soups, etc. The root can be collected all year round. The flowers can be tossed on top of a salad and eaten. (Dried, powdered flowers were once used as a snuff for nosebleeds.)

Externally, this plant can be used as a poultice to help heal wounds and hemorrhoids. Internally the leaves and roots are a valuable alternative medicine used by medical herbalists for their patients as an antidiarrheal, analgesic, anthelmintic, antiperiodic, astringent, diaphoretic, emetic, emmenagogue, expectorant, sedative, tonic, vermifuge, and vulnerary. Also, drinking spiderwort tea is supposed to be a good for increasing breast milk (Galactagogue).

Pasque Flower

Flowers, of 5 to 7 petal-like sepals, form a wide cup 1½ inches across, white or pale lavender within, and much darker lavender to purple, covered with silky hairs, on the outside.

The flower buds, quite furry at this stage, spring directly from a buried root crown before the green leaves, divided into several lobes, appear.

It goes also by the name of wind-flower, and often is called anemone. Whatever name you choose, it is one of the best-loved flowers of the Rockies. They are with us in March, going on into April, coming up through late snows—keeping themselves warm with their furs about them.

The name Anenome comes from the Greek word for wind; anemos. Anenome or Pasque flower is associated with the wind and the Greek myth of the Nymph Anenome, who was the beloved mistress of Zepher, God of the west wind. The Goddess Flora, Zepher's wife in a rage of jealousy turned Anenome into the little wind flower. In the language of flowers Anenome or Pasque represents all that is forsaken in love.

The flowers start on short stems, but the whole plant grows quite large and "leggy" as the season advances, and finally the fluffy seed plumes offer their wares to every breeze. This same pasque flower is the state flower of South Dakota. A northern species, growing in Glacier Park and in Canada, Pulsatilla occidentalis, has larger flowers, of a creamy color. Its cluster of seed plumes is large and dense enough to resemble a dish mop.

Pasque is potentially dangerous in normal herbal doses. Drop doses, homeopathic or flower essence preparations are recommended. Toxicity can included skin allergy, urinary/kidney irritation, decreased heart rate, and convulsions. It should never be taken without consultation with a qualified health practitioner.

Teasel

Dipsacus is a genus of flowering plant in the family Caprifoliaceae. The members of this genus are known as teasel, teazel or teazle. The genus includes about 15 species of tall herbaceous biennial plants (rarely short-lived perennial plants) growing to 1–2.5 metres (3.3–8.2 ft) tall. Dipsacus species are native to Europe, Asia and northern Africa.

The genus name (dipsacus) is derived from the Greek word for thirst (dipsa) and refers to the cup-like formation made where sessile leaves merge at the stem. The name teasel derives from words such as Old English tǣsl, tǣsel; relating to the verb "to tease" – the dried heads of the plant were once used in the textile industry to raise the nap on woolen cloth.

Teasels are easily identified with their prickly stem and leaves, and the inflorescence of purple, dark pink, lavender or white flowers that form a head on the end of the stem(s). The inflorescence is ovoid, 4–10 centimetres (1.6–3.9 in) long and 3–5 centimetres (1.2–2.0 in) broad, with a basal whorl of spiny bracts. The first flowers begin opening in a belt around the middle of the spherical or oval flowerhead, and then open sequentially toward the top and bottom, forming two narrow belts as the flowering progresses. The dried head persists afterwards, with the small (4–6 millimetres (0.16–0.24 in)) seeds maturing in mid autumn. In rainy weather, some seeds may germinate when still in the seedhead (vivipary). It is known to form a monoculture, capable of crowding out all native plant species, and therefore is discouraged.

Blue Vervain

A wildflower native to North America, blue vervain is often seen growing in moist, grassy meadows and along streams and roadsides where it brightens the landscape with spiky, bluish-purple blooms from midsummer to early autumn.

Let's learn more about blue vervain cultivation. Blue Vervain Information Blue vervain (Verbena hastata) is also known as American blue vervain or wild hyssop.

The plant grows wild in nearly every part of the United States. However, this cold tolerant perennial doesn't do well in climates warmer than USDA plant hardiness zone 8. Blue vervain is a traditional medicinal herb, with the roots, leaves or flowers used to treat conditions ranging from stomach aches, colds and fever to headaches, bruises and arthritis.

Native Americans of the West Coast roasted the seeds and ground them into meal or flour. In the garden, blue vervain plants attract bumblebees and other important pollinators and the seeds are a source of nutrients for songbirds. Blue vervain is also a good choice for a rain garden or a butterfly garden.

Once established, this pest-and disease-resistant plant requires little care. Keep the seeds moist until they germinate. Thereafter, one deep watering per week during warm weather is usually sufficient. Water deeply if the top 1 to 2 inches (2.5 to 5 cm.) of soil feel dry to the touch. The soil shouldn't remain soggy, but it also shouldn't be allowed to become bone dry either.

Creeping Bellflower

Flowers are arranged in a long raceme along one side of the stem at the top of the plant. Individual flowers are about 1 inch long, nod slightly, and bell-shaped with 5 pointed lobes that may have sparsely hairy edges. Inside the bell are 5 curly yellow stamens and a protruding style with a divided, curled tip.

Flower color is blue to blue-violet. The bracts at the base of the flower has 5 narrow pointed lobes that fold back away from the flower. The raceme can grow to more than half the length of the plant.

Leaves have fine, coarse teeth, a rough texture, are generally heart-shaped, becoming smaller and proportionately narrower as they ascend the stem. Lower leaves are up to 4 inches long and 2 inches wide with stalks to 6 inches long. Leaves near the top of the plant have little or no stalk. The stem is also rough from stiff hairs and is often purple, especially near the base of the plant. Plants grow erect or leaning.

Creeping Bellflower, a European import popular in the garden industry, readily escapes cultivation and can quickly become invasive, spreading both from seed (up to 15,000 per plant!) as well as its root system. It is a miserable plant and very difficult to eradicate once established. Herbicides such as Round Up are recommended by many, but are often ineffective; digging the all the tubers out may be your only hope. Any missed roots will resprout and you'll have to begin again.

Alpine Sunflower

Hymenoxys grandiflora - Alpine Sunflower, Four-nerved Daisy, Graylocks Rubberweed, Old-man-of-the-mountain. Hymenoxys is a genus of about 25 species native to western North America, Central America, and South America. About 17 are found in North America, all in the western part of the United States, with one extending its range into Canada.

Hymenoxys grandiflora was first collected by explorer and politician John Fremont (once a presidential candidate) in 1842, and it was given the name Actinella grandiflora in 1845 by botanists John Torrey and Asa Gray. In 1898 it was renamed to Rydbergia grandiflora by Edward Greene. It apparently got a lot of attention in 1980, when it was placed in Hymenoxys and then in Tetraneuris. Some authorities continue to list it as Tetraneuris grandiflora (as it was once listed in Flora of North America), and one reasonably scientific treatment listing it as Rydbergia grandiflora, but ITIS and Flora of North America call it Hymenoxys grandiflora (probably based on early 21st century papers by Mark W. Biemer). The Rydbergia association lives on in that this plant is within the Rydbergia subgenus of Hymenoxys. Whatever you call it, this bright flower makes a cheery appearance above the treeline in alpine meadows of five Rocky Mountain states. Found in: CO, ID, MT, UT, WY.

Hymenoxys grandiflora is a member of the Aster family. In spite of the name Alpine Sunflower, this plant is different from "true sunflowers" (Helianthus) and some other members of the family in that the flower of Helianthus will turn toward the sun, following it from east to west as the sun rises and sets. Hymenoxys grandiflora continues to face east, even as the sun marches across the sky. There is speculation that this may be an adaptation that protects it from the violent afternoon thunderstorms which typically arrive from the west in the Rocky Mountains.

Western Hawksbeard

Crepis occidentalis is a North American species of flowering plant in the daisy family known by the common names western hawksbeard, or largeflower hawksbeard. It is native to western Canada (British Columbia, Alberta, Saskatchewan) and the western United States (from the Pacific to the western Great Plains).

Crepis occidentalis grows in many types of habitat. It is a perennial herb growing a grayish woolly branching stem to about 40 centimeters (16 inches) in height from a deep taproot. The woolly, toothed leaves are up to 30 centimeters (12 inches) long at the base of the plant.

The inflorescence produces several clusters of flower heads with hairy, often glandular phyllaries and many yellow ray florets but no disc florets. The fruit is a ribbed achene with a frilly pappus at the tip.

Tapertip hawksbeard is utilized by wildlife and livestock. It is an important greater sage-grouse food and is highly preferred by domestic sheep. Bighorn sheep, elk, mule deer, and white-tailed deer utilize tapertip hawksbeard at low levels.

Nutritive value. Several studies have evaluated the nutritive value of tapertip hawksbeard. Hawksbeard plants collected in March or early April in sagebrush habitats in southeastern Oregon averaged 30% crude protein, 0.8% calcium, and 0.5% phosphorus. At the USSES, crude protein decreased and calcium increased as tapertip hawksbeard plants aged. Phosphorus fluctuations were more variable but tended to increase from mid-May through the end of June.

Rabbit Brush

Rubber rabbitbrush is also known as gray rabbitbrush, or chamisa. Rubber rabbitbrush is highly variable, with several different subspecies located throughout the western United States. It is typically distinguished by having whitish to green flexible stems, felt-like matted hairs, and narrow, thread-like grayish-green alternate leaves. Shrubs are rounded and generally two to five feet tall, but can reach as high as seven feet. Flower heads are made up of 5 small, yellow, tubular flowers, and are arranged in dense, rounded or flat-topped clusters at the ends of the branches. Flowers bloom from August to October as other plants are fading, providing vivid color and a pollen source for insects late in the summer. The shrubs reproduce via an abundance of small, wind-dispersed seeds and can also sprout from the base.

Rubber rabbitbrush thrives in poor conditions, and can tolerate coarse, alkaline soils. Dense stands are often found on degraded rangelands, along roadsides, and in abandoned agricultural fields. The species is useful in soil stabilization and restoration of disturbed sites. The deep root system establishes quickly and plants produce large quantities of leaf litter, helping to bring nutrients to the soil surface from the deeper rooting profile.

Native Americans reportedly used rabbitbrush as a yellow dye, to make a medicinal tea, and for chewing gum. The forage value of rubber rabbitbrush varies greatly among subspecies and ecotypes. In some locations, it can be an important browse species for mule deer, pronghorn, and jackrabbits during fall and winter. It also provides cover for mammals and small nesting birds. Livestock generally forage only lightly on this species and it is considered to be of little value to all classes of livestock.

Lady Slipper

Cypripedium parviflorum, commonly known as Yellow Lady's Slipper, is found across virtually all of the United States and Canada, from Alaska to Georgia. It is a widely variable species, with four varieties and multiple hybrids, making identification and delimitation difficult. It produces a large flower with a pale to dark yellow (and very rarely white) pouch-like labellum, which sometimes has reddish spots on the interior. Green or yellowish sepals and petals twist outwards in spirals. It produces up to five stem leaves; both the stem and leaves are covered in thin hairs. It grows in dry to mesic forests, woodlands, fens, prairies, and meadows.

This orchid has many documented pollinators including species found in Agapostemon, Andrena, Apis, Ceratina, Eristalis, Osmia and Lasioglossum. Differences in fragrance and flower size between the varieties of this orchid may account for variation in insect pollinators. For example Cypripedium parviflorum var. pubescens is pollinated by Ceratina calcarata. Cypripedium parviflorum var. makasin is likely pollinated by Lasioglossum rohweri, although the anther exit hole can also accommodate the small bee, Ceratina calcarata.

There are three varieties of Yellow Lady’s Slipper. The most common is Greater Yellow Lady’s Slipper (Cypripedium parviflorum var. pubescens). Cypripedium parviflorum var. makasin is often, but not always, smaller, and may have a musty scent. It can be found in the northern part of the range. Lesser Yellow Lady’s Slipper (Cypripedium parviflorum var. parviflorum) tends to be smaller, and has more consistently dark markings on the lateral petals and sepals. It’s range is more southern.

Sulphur Buckwheat

Sulphur flower buckwheat, Eriogonum umbellatum is one of the lowest of the perennial buckwheats, growing only 3 inches tall and 3 ft. wide, with showy yellow flowers and grey foliage; is an excellent small groundcover for higher elevations or colder parts of the U.S.

It is extreemly tolernat of heat as well as cold. Sulphur flower buckwheat thrives in dry, hot exposed spots. This flat perennial ranges west of the Rocky Mountains, likes part shade to sun, and little or no water after established.

Sulphur Buckwheat needs good drainage to the point of living in gravel. An excellent low groundcover for small areas that are too poor to support most plant life. It's very drought tolerant but best with a little water after establishment. All varieties are tolerant to cold. Most are native to 4000 ft, plus, elevations. In pine forest, in open, sunny area between trees, plants occurring nearby are Artemisia tridentata, and Pinus ponderosa. Eriogonum umbellatum's foliage turns a different color in the fall, color is silver and type is evergreen.

The seeds are an important food source for many species of birds and small mammals. Quail, sage-grouse, deer and mountain sheep eat the leaves, and insects found on the plants are an important food source for sage-grouse chicks. The plants are rated as having medium palatability for browse animals,but low palatability for grazing animals, with low protein content.

Alternate Names: Sulphur flower, buckwheat bush, sulfur buckwheat, sulfur flower buckwheat, sulphur wildbuckwheat, slender buckwheat.

Western Wallflower

Mention the word “wallflower” and most people conjure an image of a shy, unassuming person, literally pasted to the wall in stressful social situations. In botanical circles, though, wallflower is the common name for a genus of mustards (Brassicaceae family) in the genus Erysimum. A common European species, E. cheiri, earned the name wallflower for its habit of growing on stone and masonry fences and walls. The name has stuck for its North American relatives, most of which grow on sandy, clayey, or rocky flats, but not vertical surfaces. Though some native species are drab in appearance, several western species have large, showy flowers and are quite conspicuous in early spring.

Western wallflower (E. capitatum) is the most widespread of the dozen native North American species. It is equally at home in montane and alpine meadows of the Rocky Mountains as it is in desert canyons of the Great Basin and Colorado Plateau. You can recognize western wallflower by its perennial growth form, densely clustered heads of bright yellow or orange, four-petal flowers that each measure up to an inch long, and its erect, narrowly elongate fruit pods called siliques. Like other wallflowers, the western and plains species have a distinctive type of pubescence on the leaves, stems, and fruits made up of small white hairs that appear flat but are actually stalks at their center, rather than being attached at the base. For crossword puzzle aficionados, these hairs are technically called malpighiaceous or dolabriform.

In Greek, Erysimum translates as “to help or save” in reference to the medicinal qualities of several species. Practitioners of European folk medicine have used wallflower poultices to relieve bronchial congestion and American Indians used dried leaves or seeds of Plains wallflower to make a tea for stomach cramps. Wallflowers are also important sources of food for wildlife, including the caterpillars of a number of butterfly and moth species.

Yellow Avalanche Lily

As winter loosens its chill, the cheerful flowers of yellow avalanche-lily help welcome spring to foothills and mountain regions in the West. Yellow avalanche-lily is sometimes called “dogtooth violet” although it’s not a violet. This species is also known as “glacier lily” since it often appears at the edge of receding snow banks. Other common names include trout lily, snow lily, and fawn lily.

This species is found from British Columbia to California; east to Colorado, Wyoming, and Montana. In late spring and early summer, depending on the elevation, mountain meadows can be carpeted by glacier lily’s beautiful lemon yellow blossoms.

Yellow avalanche-lily was collected during the Lewis and Clark Expedition along the Lolo Trail in Idaho in June 1806. In 1813, Frederick Pursh gave it its scientific name, Erythronium grandiflorum. The genus name comes from erythro, Greek for "red," which refers to the color of the European species. Grandiflorum means "large flower." Its relative size is enhanced by the slender stem arcing above the two bright green basal leaves.

Yellow avalanche-lily is a favorite food of grizzly bears and black bears, which use their claws to comb through the soil unearthing the nutritious bulbs. Elk and deer relish the foliage. Native Americans would harvest the bulbs which could be boiled or dried and used in stews or other dishes.

Meriwether Lewis mentioned this species numerous times in his journal in spring 1806. This may be because he thought that yellow avalanche-lily could be used as a “botanical calendar” to help track the onset of spring.

Evening Primrose

Evening-Primrose. Other Names: coffee plant, cureall, fever plant, field primrose, four-o'clock, German-rampion, golden candlestick, king's cure-all, large rampion, night primrose, night willow-herb, sand lily, scabish, scavey, scurvish, speckled john, tree primrose, wild beet.

Common evening-primrose is a biennial that produces a rosette of leaves the first year and flowers borne on an upright leafy stalk during the second year of growth. There are many biennial evening-primroses that appear similar and can be difficult to distinguish. Most have 4-petaled yellow flowers that open at dusk. A few, including common evening-primrose, have lance-shaped leaves without lobes. Leaves of common evening-primrose usually appear thin and crinkled and may have a reddish midrib. Also, leaves on the lower portion of the stem are often purplish. Reproduction is by seeds.

Leaves are alternate (1 leaf per node), 4 to 8 inches long, and have edges that are wavy or slightly toothed. Leaves either attach directly to the stem or to a very short leaf stalk (petiole) connected to the stem. Leaf shape resembles the head of a lance. Leaves on the lower portion of the stem are often purplish and somewhat hairy. The midrib of each leaf may be reddish.

Flowering begins in June. Flowers open at dusk and generally wilt the following morning. Stalks continue growing throughout the season so there is a constant succession until about September.

It is thought that 'Oenothera' is Greek for 'wine scenting' and refers to the ancient use of evening-primrose roots in scenting wine. The plant was likely named 'evening-primrose' because its flowers open at dusk. Roots are edible if collected during the first year before the plant blooms. A rich oil extracted from the seeds is used as a treatment for burns and other skin wounds.

Glacier Lily

General: perennial, the stems 10-40 cm tall, leafless, unbranched, from deep, elongated, bulb-like corms. Often growing in large patches.

Leaves: basal, 1 pair, bright green, not mottled, narrowly to broadly oblong-elliptic, 10-20 cm long, narrowed rather gradually to broad stalks.

Flowers: usually solitary, nodding. Tepals lanceolate, 4-8 mm broad near the base, cream to bright yellow, 25-35 mm long, curved backward. Filaments white, linear, the anthers white, yellow or brown, or somewhat purplish, up to 10-12 mm long before opening and scarcely half as long afterward. Style slender, stigmas rather thick, 1-2 mm long, spreading.

Flowering time: April-August.

Fruits: capsules, erect, 3-sided, club-shaped, 3-4 cm long.

Distribution: Moist, shaded to open sites, sagebrush slopes to montane forest, sometimes to near treeline, in w. and s.c. parts of MT. Also from s. B.C., WA and OR to WY and CO.

Edible Uses: The bulb-like underground stems, called corms, were an important food for some tribes, and dried bulbs were a popular trade item. They are edible raw, but like onions, they are made sweeter and more easily digestible by cooking. Drying also helps this process. The corms sometimes cause a burning sensation, and too many can cause vomiting.

Warning: do not confuse with poisonous members of the lily family.

Snow Buttercup

Amidst all the showy boldness of flowers like narcissus, hyacinths or tulips, tiny yellow Eranthis Hyemalis (Winter Aconite) has a tendency to be one of the forgotten bulbs. At DutchGrown we feel it's time to change that. This cute little cousin of the buttercup might be a little bit rarer, but it is definitely worth growing in your garden, pot or container.

Eranthis originated in woodland habitats, so it's extra happy when you plant it under a tree, provided the soil is well draining and rich in humus. Winter Aconite can start flowering as early as February, but the short-stemmed flowers are quite picky: they love the sun so much that they only open when it shines, choosing to remain closed when skies are overcast. Eranthis Hyemalis (Winter Aconite) doesn't grow very tall, just 4 inches. However, this makes it an ideal size for carpet-planting. Wouldn't it be wonderful if your whole garden would be covered in large swathes of yellow flowers this early in the year?

Eranthis has no fragrance. As a member of the Ranunculaceae family, Eranthis is buttercup-yellow, with dark green leaves that are divided into several lobes which only emerge after the flowers have come out.

Eranthis blooms in late winter and early spring, about the same time as snowdrops.

Eranthis is a perennial bulb, meaning it comes back every year. When it approves of the place you have planted it, it might even start multiplying, making it a naturalizing flower bulb as well.

Stickweed

Verbesina occidentalis is a flowering plant in the family Asteraceae. The common names for Verbesina occidentalis are yellow crownbeard and stick weed. Verbesina occidentalis is often considered a weedy plant of disturbed areas, due its presence in managed agricultural areas such as hayfields.

The average height for Verbisina occidentalis is a meter tall. The plant has potential to grow to 2 meters in height. Verbisina occidentalis has yellow disk flowers. The number of ray flowers will range anywhere from two to five petals. The most common petal number is two. The flowers are sparse and are not evenly arranged around the head of the flower. A distinctive feature of the plant is its winged stem. The plant is a perennial and will bloom during the late summer. The leaves are opposite in arrangement. The leaves are broad and ovate in shape. The width of the leaves are usually eight to sixteen centimeters wide. The leaves are glabrous which gives it a smooth surface. The leaves will start to taper towards the apex. Verbesina occidentalis leaves have a serrated or toothed margin.

Verbesina occidentalis can be used in the home garden for insect control, attracting the soldier beetle. The soldier beetle is attracted to the plant for two reasons. It is believed that the soldier beetle is attracted to Verbesina occidentalis due to its coloration. The soldier beetle is also yellow and can hide among the flowers. The soldier beetle will also drink the nectar from the plant. When the soldier beetle drinks the nectar it does not harm the plant. Both the adult and larva of the soldier beetle will prey on other insects. The adult soldier beetles will eat the aphids, caterpillars, grasshopper eggs and mites. The larva of the soldier beetle hatches in the spring. The larva soldier beetles prey upon insect eggs, larva, snails, and slugs. The soldier beetle lays its eggs in the late summer.

Sulphur Flower

Flowers of sulfur (British spelling flowers of sulphur) is a very fine, bright yellow sulfur powder that is produced by sublimation and deposition. It is known as flores sulphuris by apothecaries and in older scientific works. Natural sulfur was also known as brimstone, hence the alternative name flowers of brimstone.

Production: Flowers of sulfur were traditionally produced by subliming naturally occurring sulfur, known as sulphur vivum. Impurities and moisture could cause acid residue in the product, so it was often washed, the result being known as "washed flowers of sulfur" (in Latin, flores sulphuris loti).

Flowers of sulfur is commercially available and can be bought through chemical supply companies as well as major e-commerce websites.

Uses: Historically, flowers of sulfur were extensively used medically to cure ailments, particularly skin diseases. In the early 20th century, "flowers of sulfur" was also widely used for agricultural purposes. It was specifically used in cultivating hop plants to combat and prevent fungal diseases caused by molds that can kill crops. Flowers of sulfur was also used to treat rosebushes similarly. These cases show that flowers of sulfur was one of the earliest fungicides and insecticides used agriculturally. More recent sources also show that flowers of sulfur acts a fungicide, insecticide, and fumigant, as well as an agent in the treatment of numerous skin diseases.

Flowers of Sulfur (FoS) Tests have also been used to test porosity of metallic finishes over silver, copper, and copper alloy substrates.

Alpine Avens

Geum rossii, Alpine Avens, is a common plant of high elevation regions, mostly found above the treeline. The bright yellow flowers are formed of five ovate or nearly round petals, overlapping slightly at the base, and five pointed, reddish sepals. Between the sepals are five epicalyx bracts, similar in color and appearance, but narrower. Petals are slightly longer than the sepals. Petal tips have a shallow notch. At the center are many yellow stamens, topped by yellow-brown anthers. Buds are reddish-purple in color. Flowers tend not to open fully (becoming planar), but retain a shallow cup-shape, a factor which differentiates this plant from the various species of cinquefoil.

The dense foliage grows close to the ground, but the branched flower stems reach a height of 12 inches, making the plant quite noticeable. It can form large colonies, many feet across. All the leaflets are a similar size, unlike a few similar geum species.

Common names: Alpine avens, Ross' avens. Family: Rose (Rosaceae)

Scientific name: Geum rossii. Range: The Rocky Mountain states, and parts of Arizona and Nevada. Height: Usually between 6 and 12 inches; shorter at the highest elevations. Habitat: Tundra, high elevation meadows, rocky slopes, roadsides, boulder fields; sea level to 13,000 feet. Leaves: Up to 6 inches long, compound; divided into up to 26 small, finely hairy leaflets.

Season: June to August

Cutleaf Coneflower

This herbaceous perennial plant is 3-8' tall; it branches occasionally in the upper half. The stems are light green, terete, usually glabrous, and sometimes glaucous. The alternate leaves are up to 12" long and 12" across, becoming gradually smaller as they ascend the stems. These leaves spread outward from their stems on narrowly winged petioles and they have a tendency to droop. The lower to middle leaves have 3-7 large lobes and smooth to coarsely dentate margins. The lobes of these leaves are elliptic to ovate in shape; the terminal lobes of some leaves are subdivided into 2 smaller lobes. Sometimes the lower leaves are pinnate with a pair of basal leaflets and a lobed terminal leaflet. The uppermost leaves on the flowering stalks are much smaller in size and lanceolate to ovate in shape; they lack lobes. The upper leaf surface is dark green and hairless to sparingly short-hairy, while the lower leaf surface is pale-medium green and glabrous to sparingly hairy.

The upper stems terminate in either individual or cyme-like clusters of flowerheads on stalks 2" or more in length. Each flowerhead spans about 2-3" across; it has a daisy-like structure consisting of a globoid central cone that is surrounded by 6-12 ray florets. The central cone is light green while immature, but it later becomes yellow and resembles a pincushion to some extent because of the corollas of its tubular disk florets. The petaloid rays surrounding the central cone are yellow, oblong in shape, and drooping. The base of each flowerhead is defined by 8-15 floral bracts (phyllaries); these bracts are light green, oblong-ovate in shape, and hairless to hairy. The blooming period occurs from mid-summer to early fall and lasts about 1-2 months. Each disk floret is replaced by an oblongoid achene (3-4.5 mm. in length) that has a crown of tiny blunt teeth at its apex.

Curlycup Gumweed

Curlycup Gumweed, grindelias, is a member of the sunflower family and most commonly known for their copious amount of gummy resin found on their flower heads. Several subspecies are found west of the Mississippi river. The common curlycup gumweed, Grindelia squarrosa, is often found along roadsides and grasslands in late June to September throughout the interior west, often following disturbances created by humans. It may be an annual, biennial or perennial plant and is readily recognized by the recurved (squarrose) bracts on the involucres (cups) that enclose the flower heads. The flowers are yellow and about an inch wide. Curlycup gumweed plants are about a foot tall with sessile leaves that are slightly serrate which often turn at right angle to the sun. This is why some species are often referred to as compass plant.

The grindelias have been used for many medicinal purposes by Native Americans, including as a wash for poison oak rashes and burns and for pulmonary troubles. The resinous sap that covers the leaves has been used as a substitute for chewing gum. Green and yellow dyes can be obtained from the yellow flowering heads and pods. Grindelias are still used for asthma and bronchitis, and in common cough remedies in homeopathic medicine. Because this plant is unpalatable to livestock and can readily absorb selenium from the soil it is considered undesirable by many ranchers.

The genus Grendelia was named in honor of the European botanist, D.H. Grindel, who lived from 1776 to 1836 in Latvia and Estonia.

Leafy Cinquefoil

Flowers of drymocallis fissa are light yellow in color, somewhat paler than many other cinquefoils, but otherwise similar in appearance: five rounded petals separated by five pointed greenish sepals, and a center of many stamens that become brownish when mature. Blooms are one inch in diameter. The leaves provide a better means of identification, being wider than many of the similar species, and growing in greater numbers. They, the stems and the underside of the sepals have a covering of bristly hairs. Plants branch readily and can produce many dozen flowers. This is one of the more common cinquefoil species, especially in the mountains of Colorado.

Common names: Leafy cinquefoil, bigflower cinqufoil.

Family: Rose (Rosaceae)

Scientific name: Drymocallis fissa.

Synonym: Potentilla fissa.

Main flower color: Yellow.

Range: The central Rocky Mountains; mostly Wyoming and Colorado.

Height: Between 6 and 12 inches.

Habitat: Varied; roadsides, meadows, rocky slopes, sunny places in woodland.

Leaves: Divided into (up to) 13 broad, toothed lobes, the longest 3 inches.

Season: May to August.

Plains Zinnia

Common Name(s): Golden EyeLittle Golden ZinniaPlains ZinniaPrairie ZinniaRocky Mountain ZinniaWild ZinniaYellow Zinnia.

Zinnias are water-wise annual or perennial plant in the Asteraceae (daisy) family. They are native to the limestone-based dry, sandy, loam or gravel soils in the southwestern region of the USA. The species name grandiflora refers to big or showy flowers, which Zinnias do not dissapoint.

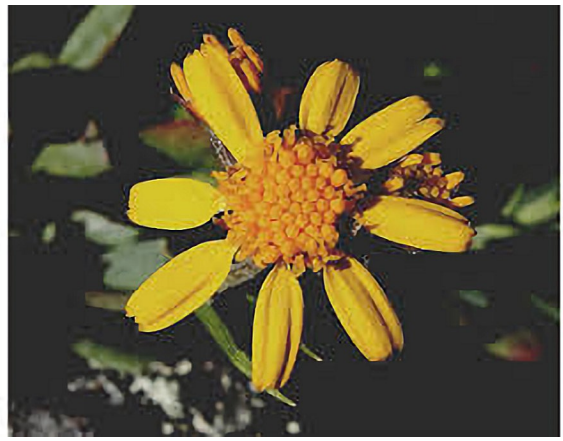
This adaptive plant is deemed to be rugged and durable, existing in conditions characterized by rocky-sandy soils, severe heat, strong winds, and cold temperatures. In the garden, it can flourish in typically difficult locations such as south-facing slopes and along hot driveways. With adequate and consistent moisture it will lose its brittle quality and will appear fuller with brighter blossoms.

Its multi-stemmed and multi-branched form gives it an almost shrub-like appearance. When not blooming, the tiny, needle-like foliage forms a low mat of green. It can be propagated from seeds or cuttings. The seeds may be difficult to source as they are easily broken when cleaned by a machine. Cuttings or division should be done in the spring.

This zinnia spreads by rhizomes, making it a go-to plant for erosion management on steep or sandy slopes. Its long bloom season lasts for most of the summer, making it ideal for perennial gardens, rock gardens, and borders. A multitude of beneficial insects are attracted to the blooms. Its pollen and nectar attract butterflies, moths, and bees.

Insects, Diseases, and Other Plant Problems: Cannot tolerate wet conditions.

Dwarf Mountain Ragwort



The small, thick, glossy leaves of senecio fremontii grow around the base but mostly along the stems, in a closely-spaced, alternate arrangement. Stems and leaves are hairless, while the leaves are lined with differently-sized, sharply-pointed teeth.

Flowerheads (about 1.5 inches in diameter) have between 8 and 15 yellow ray florets around the central yellow/brown disc florets. Buds are purplish, and the leaf edges (or just the teeth) may also have a purple tinge. Phyllaries typically number 8, 13 or 21, and they are rather wider than many other senecio species; beneath them are up to 5 (sometimes zero) bractlets, similar in appearance but less than half as long. Ray florets vary in width; they can be wide and almost overlapping or thin, somewhat twisted and well-spaced. Stems arch or grow sideways.

This is a common but low-growing species, reflecting the difficult conditions it inhabits, mainly rocky slopes and boulder fields at high elevations, though it can form large, showy, rounded clusters containing many dozen flowerheads. There are four varieties (blitoides, inexpectatus, occidentalis and fremontii), with discrete geographical ranges, differing in height, phyllary length and leaf characteristics.

Flowers: Single heads terminating the branches, usually with a short peduncle; involucre 7-12 mm. high, the principle bracts about 13; rays 6-10 mm. long, yellow.

Identification Notes: The small plant, never strictly upright, with many small, rather succulent leaves on the stems and no basal leaves, separates this species from the others.

Cowpen Daisy

Cowpen Daisy, like many worthy-but-unappreciated native plants, can only be found at pop-up plant sales staged by organizations that understand the importance of appropriate pollinator landscaping. If you happen to miss these occasional events, tough luck.

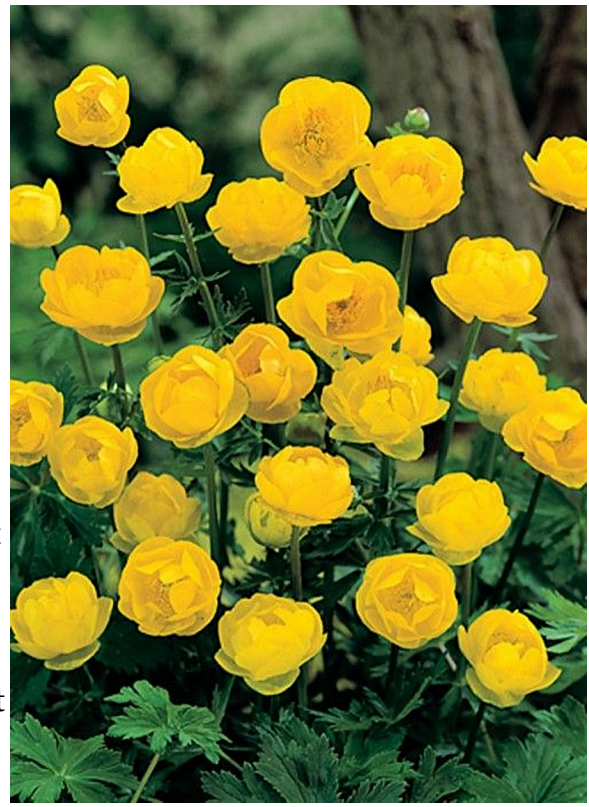
And yet Cowpen Daisy, also known as Golden Crownbeard and Butter Daisy, is ideal for our climate, and native to 30 states. It's drought tolerant, easy to grow, a prolific bloomer from late March through November and beyond.

This overachieving member of the aster family plays host plant to the Bordered Patch Butterfly, Chlosyne lacinia, and at least one species of moth. It provides nectar almost year-round to myriad pollinators. Bees love it. It's deer resistant. And birds appreciate its prolific seeds in the fall and winter, which form bulbous brown heads.

The Cowpen Daisy is a self seeding annual, it may result in "lots of seedlings that may be too much work for some gardeners." But this could also be a plus since the seedlings can be moved to other areas of the garden, shared with friends, or "simply left in place to expand their Cowpen Daisy patch for an even bigger flower show."

Native Americans used Cowpen Daisy to treat some skin ailments and spider bites. It could be widely found throughout the prairie states and is an annual forb of about 1-3 ft tall that likes to grow in disturbed sites, hence the name. It is also frequently called Golden Crownbeard. Cowpen daisy is a favorite to many because of the time of year that it blooms, summer to first frost, and the simple fact that it is one of the easiest yellow composite flowers to identify.

Globe Flower



Trollius europaeus, commonly known as common globeflower or European globeflower, is a clump-forming perennial of the buttercup family that features a late spring to early summer bloom of globular lemon-yellow flowers (to 2" across) atop sparsely-leaved stems rising to 18-24" tall. It is native to damp meadows, moist open woodlands, stream banks, wet pastures and scrubby areas.

Easily grown in rich, humusy, moist to wet, well-drained soils in part shade. Tolerates close to full shade. Leaves may bleach out in full sun. This plant thrives in cool weather. It dislikes dry soils and hot summers. The hotter the summer temperatures the more shade the plants require. Plants will self-sow in optimum growing conditions. Plants require consistently moist soils and will thrive in boggy ones.

Long stalked palmate basal leaves (to 4-6" long) are deeply divided into 3-5 ovate toothed lobes. Smaller sessile stem leaves have 3 ovate lobes. Branched to branchless stems rise from the base of the basal foliage clump in late spring bearing globular flowers (1-2" diameter) each of which contains a ring of 10-15 showy, bright yellow, inward curving, petaloid sepals surrounding five petals. Flowers appear usually singly but sometimes in pairs.

Uses: Excellent for moist soils along streams or ponds. Bog gardens. Moist meadows. Also appropriate for moist areas of borders, rock gardens or open woodland areas. Mass plantings can be spectacular in flower. Good with ferns and astilbe.

Golden Banner

Common Name: Golden Banner, Yellow Pea, False Lupine. Botanic Name: Thermopsis Montana.

Plant Family: Fabaceae. Habitat: Great plains to the intermountain regions, prefering well drained soils of open woodlands and hillsides. Can form large colonies in hay meadows.

Animals Affected: Cattle

Toxic Principle: The principle toxin has not been isolated, but is thought to be similar to quinolizidine alkaloids found in Lupines. The toxin causes acute muscle degeneration. Poisoning is similar to that seen with Cassia species.

Description: Erect, perennial up to 2 feet in height, with multiple stems arising from a spreading root system. Leaves are alternate, palmate, with 3 leaflets. Flower spikes arise from leaf axils. Pea-like flowers are distinctive, with prominent yellow petals. Seeds are produced in straight or curved hairy pods, constricted between seeds.

Musculoskeletal: Cattle become weak, ataxic and unable to stand due to severe muscle degeneration. Animals die from hunger and thrist once recumbent due to muscle degeneration. Treatment: Supportive therapy including oral fluids containing electrolytes and a good quality diet. Recumbent animals need to be well bedded to prevent pressure induced myositis. Diagnosis: Muscle degeneration evident at necropsy.

Special Notes: Golden banner remains toxic in hay, especially if seed pods are present.

Old Man Of The Mountain

This handsome wildflower cannot easily be missed by hikers in much of the alpine tundra from Idaho and Montana to Utah and Colorado. The stout stems are covered with woolly white hairs, and the solitary yellow flower head is large enough to dwarf the rest of the plant. The early bloomers are only a few inches tall, but later in the summer plants can reach nine or ten inches in height.

Some species in the sunflower family have flowers that face toward the sun, slowly following as it traces an arc across the sky. But the old-man-of-the-mountain always faces east (except for the occasional odd man out!), which makes this plant a potentially useful guide to a lost hiker on a heavily overcast or foggy day (Safety First: always carry your compass).

Also known as alpine sunflower, Old-Man-of-the-Mountain gets its name from a distinguishing characteristic: its hairs. Long villous woolly hairs cover much of the soft feathery leaves and a soft tomentose of shorter densely tangled hairs coat the peduncle (a stem-like structure that subtends each flowering head or involucre). A member of the sunflower family, Asteraceae, Old-Man-of-the-Mountain displays one of the showiest-brightest yellow-flowering heads in open areas of the alpine. It stands no taller than 12 inches, but the bundle of 1 to 10 flowering heads can also reach as wide as a foot.

As the plant matures, its yellow vibrant color fades to tan. The enjoyment of seeing this spectacular alpine sunflower is that where it grows it can be locally abundant producing a refreshing display of color amidst the rocky gray landscape.

Shortfruit Evening Primrose

SHORT-FRUIT (DESERT) EVENING PRIMROSE.
OENOTHERA BRACHYCARPA

Evening-Primrose Family, Onagraceae

Perennial herb

With leafy basal rosettes and either stemless or with short stems, this plant has nearly entire to slightly-lobed, lance-shaped leaves. Note the flower tube in the leaf axils reaches 6-inches long topped with 4 showy yellow petals. Flowers open near sunset and fade the next day to reddish-orange.

FLOWER: May–July. Flower tube 2–6 inches long (5–15 cm) with 4 oval to diamond-shaped With petals, each 1 1/4–2 3/8 inches long (3–6 cm); stigma has cross-shaped lobes; buds erect with free tips, often with red stripes; fruit is an oval to elliptic capsule, 1–1 1/4-inches long (25–30 mm), winged for the entire length.

LEAVES: Basal and alternate on short plant stems; petiole (leaf stem) 3/8–2 3/8 inch long (1–6 cm). Blade oval to lance-shaped, 1–6 inches long (3–15 cm); margins entire to lined with shallow, tooth-like lobes; surfaces covered with short, soft hairs.

HABITAT: Gravelly, rocky soils; grasslands, desert scrub, pinyon juniper woodlands.

ELEVATION: 4,000–8,225 feet.

RANGE: AZ, CO, ID, KS, NM, NV, TX.

SIMILAR SPECIES: The yellow flowers and entire or slightly-lobed leaves distinguish this species for other yellow evening primroses.

Prickly Pear Cactus

Most prickly pear cactus have yellow, red or purple flowers, even among the same species. They vary in height from less than a foot (plains, hedgehog, tuberous) to 6 or 7 feet (Texas, Santa Rita, pancake). Pads can vary in width, length, shape and color.

The beavertail, Santa Rita and blind pear are regarded as spineless, but all have glochids.

Prickly pear cactus represent about a dozen species of the Opuntia genus (Family Cactaceae) in the North American deserts. All have flat, fleshy pads that look like large leaves.

The pads are actually modified branches or stems that serve several functions -- water storage, photosynthesis and flower production. Chollas are also members of the Opuntia genus but have cylindrical, jointed stems rather than flat pads.

Like other cactus, most prickly pears and chollas have large spines -- actually modified leaves -- growing from tubercles -- small, wart-like projections -- on their stems. But members of the Opuntia genus are unique because of their clusters of fine, tiny, barbed spines called glochids.

Found just above the cluster of regular spines, glochids are yellow or red in color and detach easily from the pads. Glochids are often difficult to see and more difficult to remove, once lodged in the skin.

The prickly pear cactus pads, or nopales, may be used in a variety of nutritious dishes, including salads, stews, omelets, casseroles, breads, and tortillas. They may also be simply pickled in brine and used as a condiment.

Shrubby Cinquefoil

Potentilla, also called shrubby cinquefoil or bush cinquefoil, is one of the most popular landscape shrubs. It is valued for its long bloom time, exceptional hardiness, and carefree nature. Tolerant of a wide range of growing conditions, this sturdy plant stands up to drought, air pollution, and salt air, making it ideal for urban environments and beachfront locations. Despite its toughness and reliability, potentilla isn't suited to southern regions with hot, humid summers.

A versatile addition to any landscape, potentilla shrubs can be used as hedging, massed along a slope, as a specimen in a mixed border or rock garden, and in containers. It's also a good choice for firescaping and erosion control. The flowers are an important food source for butterflies and pollinating insects.

The saucer-shaped blooms come in shades of white, yellow, pink, orange or red. Flowers are usually single, but can also be semi-double or double. Foliage is finely textured, bright to dark green, with palmate leaves ¾ of an inch to 4 inches long that have 3 to 15 fingerlike leaflets. Fruit is inedible and somewhat dry—resembling strawberries—hence nickname "barren strawberry." Fall color is insignificant on most varieties.

Potentilla is an herb whose flowers and leaves are used as natural remedies for stomach upsets or inflammation. It is not known to be harmful to children or pets.

There are 500 species, including shrubs and perennials, with a small percentage being annual or biennial. The common name cinquefoil, meaning "five leaves," refers to the five leaflets found on many varieties.

Prairie Pea

Thermopsis montana - Mountain Goldenbanner, Mountain Thermopsis, False Lupin, Golden pea, Buckbean. Thermopsis montana is one of 10 Thermopsis species in the United States, although some authorities include it in the very similar T. rhombifolia (Prairie Thermopsis.) T. montana is the more western of these two species, with Montana being the only state having both species.

Mountain Goldenbanner has a spike of fairly large (for a member of the Pea Family) yellow blossoms terminating the branches. The shape makes them quite recognizable as blossoms of Fabaceae.

General: Herbaceous perennial from thick, woody rhizomes, the stem 5-10 dm. tall, more or less hollow, densely pubescent, or glabrous below.

Leaves: Leaves trifoliate, leaflets linear-elliptic to oblanceolate, up to 10 cm. long; stipules linear-lanceolate, leaf-like.

Flowers: Inflorescence of sub-terminal, bracteate, axillary racemes, erect, 10- to 60-flowered, 1-3 dm. long; flowers pea-like, yellow, erect, 20-25 mm. long; calyx bell-shaped, bilabiate, the lips toothed; stamens 10, distinct.

Fruits: Pods erect to spreading, straight, villous, leathery.

Prickly Poppy

Mexican prickly poppy (Argemone mexicana), also known as goatweed, Mexican thistle, prickly poppy, and yellow thistle, is a member of the poppy family. It is an annual or biennial plant that is found east of the Rocky Mountains, Hawaii, and Puerto Rico. In Florida, it is typically recognized as 'some type of thistle' until it flowers.

Young Mexican prickly poppies are often mistaken for thistles because their toothed and prickly leaf margins give them a thistle-like appearance. One recognizable difference is that Mexican prickly poppy exudes a yellowish milky sap when its stem is broken, while thistles do not. Another difference is that Mexican prickly poppy flowers are relatively large and yellow with 4 to 6 petals, while thistles have inflorescences composed of many small flowers. Like thistles, Mexican prickly poppy reproduces only through seed production. Its seeds are enclosed in a relatively large spiny capsule. Approximately 400 seeds can be produced in one capsule.

Stem: Cylindrical, whitish in color and with scattered prickles. The broken stem exudes a yellowish milky sap.

Leaves: Leaves can be up to 8 inches long, and are silvery-green with white veins and deep regular lobes. The upper surface of the leaf is smooth, while the underside has a few prickles along the midrib. The edges of the leaf are often lined with many prickles.

Flowers: Flowers are yellow and approximately 2.5 inches in diameter.

Alpine Buttercup

Alpine Buttercup - Ranunculus adoneus is a high elevation species, usually found in short grass meadows near the edge of melting snow; it is most widespread in the Rocky Mountains of Colorado and Wyoming, with smaller occurrences in Idaho, northern Utah and eastern Nevada.

Leaves are relatively small and are divided two or three times into linear lobes, round-pointed at the tip. Leaves grow at the base and at wide intervals along the stem, often just one pair. Stems are hairless, quite thick, erect or ascending, and are topped by one (usually) to three flowers, which are larger than the leaves, up to 1.5 inches in diameter.

Flowers have between five and ten yellow, wedge-shaped petals, and five shorter, greenish-yellow sepals, which have white hairs on the lower surface. Sepals are broad at the tip. The flower is cup-shaped; petals are overlapping, and curved up towards the tip. The outer edges of the petals are slightly irregular.

R. acraeus is specific to high alpine environments. It grows in stable, coarse rock fields of non-foliated schist and greywacke. The rocks have been fractured into coarse and angular rocks of different sizes and shapes. The rocks are about 10–30 cm in diameter. They are found on boulder fields of mountains with an upward height of 1500 meters. These buttercups do not grow well at lower altitudes and will die.

There are no known usages of the plant. They would not survive if they were outside of their high-altitude alpine environmental. They would make a great ornamental plant if they were able to survive elsewhere.

Yellow Evening Primrose

Evening-Primrose Family (Onagraceae). Other Names: coffee plant, cureall, fever plant, field primrose, four-o'clock, German-rampion, golden candlestick, king's cure-all, large rampion, night primrose, night willow-herb, sand lily, scabish, scavey, scurvish, speckled john, tree primrose, wild beet, yellow eveningprimrose.

It is likely that common evening-primrose, which is a North American native, was exported to Europe in the 1600's when written descriptions of it began appearing there. Now, it is naturalized all over Europe. In the U.S., its range includes an area between the east coast and North Dakota and it is located on the West Coast as well. Common evening-primrose can be found throughout Ohio growing in open disturbed areas such as fields, pastures, gardens, roadsides, and waste places. It prefers to grow in dry gravelly or sandy soil.

Common evening-primrose is a biennial that produces a rosette of leaves the first year and flowers borne on an upright leafy stalk during the second year of growth. There are many biennial evening-primroses that appear similar and can be difficult to distinguish. Most have 4-petaled yellow flowers that open at dusk. A few, including common evening-primrose, have lance-shaped leaves without lobes.

Roots are edible if collected during the first year before the plant blooms. Common evening-primrose has been assigned numerous medicinal properties. For example, researchers are experimenting with a rich oil extracted from the seeds for use as a treatment for burns and other skin wounds.

Spreadfruit Goldenbanner

Spreadfruit Goldbanner - Origin: Native Life Cycle: Perennial Similar Species: Thermopsis.

General Desc: Stems woody below, or from woody crown; erect, perennial stems are less than 39 inches tall, smooth or sparsely hairy.

Identification notes: Rhizomatous, perennial with yellow pea-like flowers in terminal spike-like short-branched flower heads; seed pods are spreading and slightly curved; stipules (leafy growths) at the base of the leaf stalks are relatively wide, and oval in outline.

Height: To 39 inches. Habitat Description: Mostly wooded areas in sunny or partly shaded locations in pine forests. Plant Communities: Montane Conifer Forest. Elevation: 6000 - 9500 feet.

Flower Characteristics - Color: Yellow or orange. Shape: Irregular in elongated clusters, Tubular, Flowering Period: Apr - Jul.

Description: Flower bracts 5-lobed, smooth; flowers have a typical pea-shape, petals yellow, banner petal broadly rounded, wing petals narrow lobe-shaped to lance-shaped and broadest above the middle and tapering toward the base. Leaf Color: Green Leaf Type: Compound Leaf Shape: Round or oval Leaf Margin: Smooth Leaf Attachment: Alternate. Leaves trifoliate, leaflets often folded slightly upwards and have very fine hairs along the edge.

Yellow Prairie Violet

Named after James Nuttall, an important figure in early United States botany, Viola nuttalii or 'Nattall's Violet' is a 4 inch tall flowering plant that loves dry sandy/gravelly soil and enjoys basking in full-sun. Finds comfort in a variety of settings including dry prairies, open grasslands, bluffs, woodlands, and even rocky situations. This plant is native to Western Canada and North-Central and Western United States, stretching all the way down to New Mexico. Very prevalent in Montana and Colorado, this plant's western expansion seems to have been contained behind the great mountain ranges. On its eastern edge of distribution, Viola nutallii is a threatened species in Minnesota.

Viola nuttallii is actually distinguished for being one of the few herbaceous violet species to have lanceolated leaves; a leap tapered to points on both ends. Bright yellow flowers bloom April-June. The latin word Viola means 'violet-colored', which is quite ironic considering the only violet color on the plant are the small stripes on their petals.

Viola nuttallii is one of the larval host plants of the Great Spangled Fritillary butterfly, the Mormon Fritillary butterfly, Silver-Bordered Fritillary butterfly, the Coronis Fritillary butterfly, Edward's Fritillary butterfly, and the Variegated Fritillary butterfly.

Yellow prairie violet is an attractive dryland violet with clumps of green leaves and several bright yellow flowers found on stems (to 15 cm high) that are about equal in height to the leaves. The leaf blades range from smooth to copiously covered with minute hairs, the blades narrowly elliptic lanceolate to ovate or lanceolate, depending on the variety.

Rockyscree False Golden Aster

Heterotheca fulcrata resembles numerous other sunflower-like plants of the asteraceae family; identifying features include the long, quite well-separated hairs along the leaf edges and the reddish-green stems, and the relatively large leaves that grow right beneath the flowerhead, projecting out beyond the petals. The bright yellow ray florets usually number between 11 and 21, disc florets between 26 and 66. Phyllaries are also hairy, and lanceolate in shape, and occur in 4 or 5 rows. They are usually not glandular (ie not sticky). Some are elongated (over half an inch) to form leaf-like bracts, and are also visible when looking at the flower from above. There are several varieties of this species, differing in the type and distribution of the leaf hairs, the shape of the phyllaries and the glandularity of the leaves.

It has been found in northern Mexico (Sonora, Chihuahua, Coahuila, Nuevo León, Tamaulipas, Zacatecas) and in the western United States (from Arizona, New Mexico, western Texas north to Wyoming and Idaho).

Heterotheca fulcrata is distinguished by the one to several, usually distinctive, ovate-lanceolate bracts subtending at least some heads of the arrays; the bases of the bracts are attenuate to sometimes winged-subpetiolate. In plants with large, ovate distal leaves, the bracts are sometimes hidden by the leaves. Rarely, such bracts are missing below most heads or only one is present, making identification problematic, but the leaf margins usually harbor large hispido-strigose cilia along much of their length. The density of hairs and glands on leaves, the size and shape of leaves, and the number of florets vary greatly within the species. Four varieties are recognized on the basis of differences in those traits and in the frequency of large hispido-strigose hairs along the leaf margins.

Alpine Goldenweed

Upright shrub. Stems, twigs white-woolly. Leaves oblong, 1/3–1 1/2 in. long, sessile, coated with gland-tipped hairs. Flower heads in clusters at stem tops, bell-shaped cup created by 2–3 rows of bracts covered with gland-tipped hairs. Flowers composed of 10–26 yellow disk flowers, no ray flowers. Grows on dry rocky slopes, outcrops, at high elevations. Discoid refers to the head being composed entirely of disk flowers. Chrysothamnus humilis is similar, with leafy stems, leafy-looking cup not sticky, 2–4 1/4 in. pale yellow ray flowers.

The plant is endemic to the western United States, especially the Great Basin region of the inland Pacific Northwest, northeastern California, and northern Nevada. It grows in cold, dry regions such as sagebrush plateau and high mountain slopes in subalpine and alpine climates.

Stenotus lanuginosus is a perennial herb usually forming a compact tuft of herbage with a fibrous root system. The leaves are linear to widely lance-shaped leaves and measure up to 10 centimeters long. They are coated in white woolly fibers and are generally glandular.

The inflorescence is a solitary flower head with woolly or hairy green phyllaries. The flower head contains yellow disc florets and several yellow ray florets each about a centimeter long.

Yellow Monkeyflower

Erythranthe guttata, with the common names seep monkeyflower and common yellow monkeyflower, is a yellow bee-pollinated annual or perennial plant. It was formerly known as Mimulus guttatus.

Erythranthe guttata is a model organism for biological studies, and in that context is still referred to as Mimulus guttatus. There may be as many as 1000 scientific papers focused on this species. The genome is being studied in depth. A highly variable plant, taking many forms, E. guttata is a species complex in that there is room to treat some of its forms as different species by some definitions. Erythranthe guttata is 10 to 80 cm tall with disproportionately large, 20 to 40 mm long, tubular flowers. The perennial form spreads with stolons or rhizomes. The stem may be erect or recumbent. In the latter form, roots may develop at leaf nodes. Sometimes dwarfed, it may be hairless or have some hairs.

Leaves are opposite, round to oval, usually coarsely and irregularly toothed or lobed. The bright yellow flowers are born on a raceme, most often with five or more flowers. The calyx has five lobes that are much shorter than the flower. Each flower has bilateral symmetry and has two lips. The upper lip usually has two lobes; the lower, three. The lower lip may have one large to many small red to reddish brown spots. The opening to the flower is hairy.

Erythranthe guttata is pollinated by bees, such as Bombus species. Inbreeding reduces flower quantity and size and pollen quality and quantity. E. guttata also displays a high degree of self-pollination. Erythranthe nasuta (Mimulus nasutus) evolved from E. guttata in central California between 200,000 and 500,000 years ago and since then has become primarily a self-pollinator. Other differences have occurred since then, such as genetic code variations and variations in plant morphology.

Broadleaf Arnica

Arnica latifolia is a species of arnica in the sunflower family, known by the common names broadleaf arnica, broad leaved arnica, mountain arnica, and daffodil leopardbane.

It is native to western North America from Alaska east to Northwest Territories and south to Mono County, California, and Taos County, New Mexico. It grows in mountain habitat such as forest and meadows.

Arnica latifolia is a perennial herb growing from a long rhizome and producing a hairy, mostly naked stem 10 to 50 centimeters tall. It has a cluster of leaves around its base and usually a few pairs along the lower part of the stem.

The leaves are lance-shaped to broad and nearly heart-shaped, and are usually toothed.

The inflorescence contains one or more daisy-like flower heads lined in glandular phyllaries. Each has a center of yellow disc florets and several yellow ray florets up to 3 centimeters long. The fruit is an achene with a white pappus.

The plant was first described in 1832 by German-Russian botanist Gustav Heinrich von Bongard, based on material collected near Sitka, now in Alaska (then called Russian America).

The species could be confused with the similar Arnica cordifolia, from which it can be distinguished by the leaves.

Stemless Four-Nerve Daisy

Identifying features of tetraneuris acaulis include the clustered basal leaves, the long hairs on the basal leaves, the lack of stem leaves, the number of ray florets (usually 7 to 15), and the outer phyllaries, which number between 6 and 12 and are red along the edges, green in the middle.

Plants may produce just one stem or up to 30, to a height of around one foot. Stems may be pendent at first but are erect when fully grown, and and topped by a single yellow flowerhead. Stems are reddish green in color and have a covering of long white hairs, some against the surface, others radiating outwards. Leaves grow in untidy clusters around the base of the stems, usually mixed with shrivelled leaves from the previous season. Leaves do not have a prominent midvein. The yellow ray florets have three notches at the tips, and are about 1.5 inches long. The flower center is formed of between 25 and 100 yellow/orange disc florets.

There are four variaties (acaulis, arizonica, caespitosa, epunctata), differing in such aspects as leaf hairiness, phyllary length and presence/absence of small glands on the leaves.

Common name: Stemless four-nerve daisy. Family: Aster (Asteraceae).

Scientific name: Tetraneuris acaulis.

Synonym: hymenoxys acaulis. Range: The Rocky Mountain states, and parts of all other western states except Oregon and Washington.

Height: Up to 12 inches. Habitat: Forest margins, meadows, roadsides. Leaves: Basal only, spatulate to linear, quite thick, and hairy, 1 to 2 inches long. Season: April to September.

Goldeneye

Showy goldeneye (Heliomeris multiflora) grows throughout the mountain west from foothills elevations up to the subalpine (3,000-11,800 feet). It inhabits open, dry to moderately moist slopes and is very common along roadsides. It blooms from July through September, often brightening many acres with golden yellow.

This herbaceous perennial plant grows in bushy clumps standing 1 to 4 feet tall. The leaves are broadly to narrowly lance-shaped, slightly toothed, and 1 to 3 inches long. All but the uppermost leaves are opposite on the stem. The flower heads are borne at the ends of the branches. Both the ray flowers and disk flowers are yellow forming heads 1 to 1.5 inches broad. This is an attractive plant with a sunflower like appearance, but the flowers are smaller and more numerous than those of common sunflower (Helianthus annuus).

Showy goldeneye is in the small genus Heliomeris, which is a group of five species found in the western U.S. Showy goldeneye is placed in the genus Viguiera in some books. Heliomeris and Viguiera are closely related to Helianthus (sunflowers).

The showy goldeneye adds a lot of color to our western landscapes in the fall. It is one plant that does not deserve being called just another DYC (doggone yellow composite), which is a term of convenience coined by botanists for the yellow-flowered members of the sunflower family (Astereceae). The term DYC came about because the sunflower family with about 1,500 genera and 23,000 species worldwide is the largest flowering plant family, and many species have yellow flowers.

Hairy Evening Primrose

Also known as Hooker's Evening Primrose. Like the long, lance-shaped leaves, the reddish brown stems of oenothera villosa are hairy, and grow vertically, to a height of 5 feet.

Stems may branch a few times, or remain unbranched. Leaves usually have indistinct teeth along the edges, and a distinctly reddish or whitish vein along the middle (most visible on the lower surface).

Flowers form in small clusters at the top of the stem and the upper leaf axils; they consist of four green or reddish sepals, around half an inch long, and four yellow to pale orange petals, obovate in shape and notched at the tip, centered on eight stamens and a four-parted style. Petals are about one inch in length.

Taprooted biennial or short-lived perennial. Stems erect, simple or branched at the base, 30–100 cm. Herbage strigose, sparsely hirsute, glandular above. Leaves basal and cauline, lanceolate to oblanceolate; the basal 7–20 cm, deciduous, entire to weakly dentate; cauline leaves reduced upward.

Flowers light yellow; hypanthium 2–4 cm long, glandular-puberulent; sepals 1–2 cm long; petals 8–15 mm long; stigma lobes 4–7 mm long. Capsule ascending, linear, 2–5 cm long, cylindric, strigose, hirsute.

Other Common Names: Hairy evening primrose, western evening primrose, marsh evening primrose. As its name implies, Hooker’s evening primrose has nocturnal flowers that open in the evening and wither the following morning. It is primarily pollinated at night by sphinx moth, but may be visited by other insects near dawn and dusk.

Goat's Beard

Goatsbeard, also known as bride's feathers, is a perennial forb in the rose (Rosaceae) family. Native to the northern hemisphere in North America, Europe, and Asia, this plant generally grows in moist woods, meadows, and along streams. It is also known to grow in moist to wet ravines, rocky ledges, and avalanche chutes. In south-central and southeastern Alaska, goatsbeard grows abundantly in forest edges and along roads and railroad embankments.

Goatsbeard is a very showy plant growing up to six feet tall in large bushy clumps. Goatsbeard is a dioecious plant meaning each plant has either all female flowers or all male flowers. Plants with male flowers produce showier blooms than plants with female flowers. The word "Aruncus" comes from the Greek word aryngos (goat's beard) and refers to the plume of flowers. The bi-pinnately compound leaves are toothed and lower leaves tend to be larger than higher leaves.

The spectacular display of goatsbeard makes it a popular choice for gardeners, particularly those who like to garden with native flora. Goatsbeard can be started from seed, but takes a long time to grow and become established. They are also easily transplanted and grow well in moist, rich soil and sites with partial shade. In the northern part of its range, goatsbeard also thrives in full sun.

Native Americans have used goatsbeard for medicinal purposes. For example, poultices made from the roots have been used on sores. Infusions from the roots have been used for a variety of cures including rheumatism, sore throats, fevers, and blood disease.

Prairie Sunflower

Helianthus petiolaris is a North American plant species in the sunflower family, commonly known as the prairie sunflower or lesser sunflower. Naturalist and botanist Thomas Nuttall was the first to describe the prairie sunflower in 1821. The word petiolaris in Latin means, “having a petiole”. The species originated in Western United States, but has since expanded east. The prairie sunflower is sometimes considered a weed.

Helianthus petiolaris originated in the dry prairies of Minnesota, Oregon, Texas, the Dakotas, California, and other states in Western and Central United States. It has since expanded its distribution to throughout the Eastern United States and into central and western Canada. It is now the most widely distributed species of sunflower besides H. annuus.

Prairie sunflowers are commonly found growing in sandy areas. They can also be found in heavy clay soil and in dry prairies. They are unable to grow in shady areas; they need to be in direct sunlight. Prairie sunflowers require dry to moist soil. This species of sunflower is an annual flower, blooming between June and September.

Prairie sunflower is a taprooted annual. It grows up to 4 ft (120 cm) tall. The leaves appear alternate and the flowers have a close resemblance to the traditional sunflower. The flowers are hermaphrodites, which means the flowers contain both male and female parts.

The seeds in the plant are edible and can be ground up into an oily meal or into a butter. Powdered leaves of the prairie sunflower are said to work well with the healing of sores and swellings.

Heartleaf Arnica

Many plant-lovers get discouraged with identifying the myriad species of yellow-flowered composites in the aster or sunflower family (Asteraceae). Thankfully, the arnicas (genus Arnica) are relatively simple to identify. They are the only genus of yellow-rayed composites that regularly have opposite, simple leaves (not divided into leaflets) and hair-like (capillary) bristles topping the fruits. All of these features can be seen without magnification.

Taxonomists recognize 29-32 species of Arnica across the Northern Hemisphere, with 26 native to North America.

Fortunately, Heartleaf arnica (Arnica cordifolia) is one of our more easily identifiable Arnica species. The plant derives its common and scientific names from its basal leaves which usually have a deep, heart-shaped notch at the base. By comparison, other Arnica species generally have sessile or smooth-margined leaves or at least lack the heart-like shape. Arnica cordifolia can also be recognized by its single (occasionally 2-3) large and showy flower head of bright yellow petal-like ray flowers surrounding a central cluster of small, yellow tubular disk flowers.

Europeans and Native Americans independently discovered the medicinal qualities of Arnica species. For centuries, the European species Arnica montana has been used to treat acne, bleeding, and pain. More than 100 arnica-based teas and preparations are still marketed in Germany, though physicians caution against over-consumption or taking it internally, as the plant can be toxic. Native Americans used the root of Heartleaf and other arnica species to treat sort throats, aching teeth, cuts, and bruises. Mixed with ocher and bird feathers, arnica was also used as a sort of love potion.

Orange Sneezeweed

Common Name: Orange Sneezeweed. Botanic Name: Dugaldia hoopesii (Helenium hoopesii).

Plant Family: Asteraceae. Habitat: Sneezeweed grows at altitudes of 5,000-10,000 feet in moist but well drained soils of mountain meadows and aspen groves.

Animals Affected: Sheep especially, but cattle and horses are susceptible to poisoning. Goats seem tolerate much more of the plant before being affected.

Toxic Principle: Dugaldin (hymenovin), a sesquiterpene lactone, is highly irritating to the mucous membranes of the respiratory and digestive tracts causing sneezing and projectile vomiting. The toxic dose is 0.3-1.0% body weight of the green plant. If eaten in large quautity death may result in a 1-2 days. More commonly, small amounts of the plant are eaten over time which leads to the more typical digestive signs seen.

Description: Perennials growing to 2 1/2 feet in height, with numerous broad clasping leaves near the base of the stem. Multiple flowers are large and showy with 3-5 toothed orange/yellow petals up to 2 inches in length.

Gastrointestinal: Decreased appetite, bloating, teeth grinding and rumen stasis may be seen initially. Projectible vomiting of rumen contents leading to dehydration, weight loss, weakness and inhalation pneumonia. A common name for the disease is 'Spewing sickness.'

Musculoskeletal: Muscle weakness, ataxia, especially in lambs causing them to lag behind the flock.

Treatment: Remove animals from the source of the sneezeweed and provide nutritious food and water.

Arrowleaf Balsamroot

This plant's Latin name corresponds with its common name, which in turn well describes the plant. Arrowleaf balsamroot, a plant of the Asteraceae (sunflower family) is fairly common in cold, dry areas of the West from Colorado, west to the Sierra Nevada, and into Canada. It may be found most abundant in mountain fields, but can also be a common plant in the understory of conifer forests.

B. sagittata has beautiful, bright yellow flowers: in fact, another common name for it is "Oregon sunflower". Like the rest of the sunflower family, its "flowers" are actually inflorescences composed of numerous tiny flowers (florets) that take up different jobs: each of the ‘petals'. It can be seen from May to July.

The leaves are arrow shaped, meaning that the blades are triangular and pointed. They can be from two-thirds to one and two-thirds of a foot long. The leaf blades are fuzzy, especially on the top (adaxial) side.

A large, deep, thick taproot completes the name, having a diameter the width of a hand and a branching root going some feet deep. The thicker portions are covered with bark. The balsam portion of the name refers to a resin in the root.

Nearly all parts of this plant were used as food by various Native American groups. The roots may be baked or steamed and eaten, as well as the young shoots. The immature flower stems could be peeled and eaten; the flowers themselves are good browse for wildlife. Balsamroot seeds are nutritious and oil-rich, another good source of food. The root could be used as a coffee substitute. It was also used medicinally.

Mule's Ears

Mule's Ears are very showy and often cover many acres of low montane meadows with large, bright orange/yellow flowers.

Mule's Ears might be confused with its close cousin, Arrowleaf, but the leaves of the two are quite different: Mule's Ears leaves are two-to-four inches wide and up to a 16 inches long; Arrowleaf leaves are about four inches wide and six-to-nine inches long and arrowhead shaped. The Mule's Ears plant is usually several inches taller with larger flowers. Mule's Ears usually blooms several weeks after Arrowleaf has started blooming.

The first species shown below, Wyethia arizonica is quite hairy and its leaves are sessile or on short to long petioles. According to Weber, this species hybridized with Wyethia amplexicaulis, a species not now found in the Four Corners area, but found here during the Pleistocene. This cross produced the stable hybrid, Wyethia x magna, still a common species of the Four Corners area. It has characteristics of both parents and usually has smooth, hairless leaves that clasp the stem. Weber's Wyethia x magna is not mentioned by Ackerfield in her Flora of Colorado, although she does acknowledge that W. arizonica presently still hybridizes with W. amplexicaulis. The Flora of North America also indicates that hybrids are still occurring where the ranges of W. amplexicaulis and W. arizonica overlap.

Nathaniel Wyeth was an 19th century eastern merchant who mounted several Western commercial and exploratory expeditions; the second included botanist Thomas Nuttall and ornithologist John Kirk Townsend. Nuttall named the Wyethia genus in 1834 from specimens collected by Wyeth in 1833-1834 on his first expedition.

Creeping Barberry

Creeping Barberry, Mahonia Repens, is a small shrub just a few inches tall, found in a range of habitats - from relatively overgrown areas in conjunction with other bushes and trees, to open, rocky slopes, at low to medium elevations. The holly-like leaves are compound, divided into 5 or 7 leaflets which have rounded tips, a flattish base, and very shallow lobes around the edge, each centered on a short spine. Leaflets are bright green on top, duller underneath, becoming red as they age, especially in the fall. Leaves have stalks of up to 3.5 inches. Stalks and stems are reddish in color.

The inflorescence is a dense cluster of up to 50 small yellow flowers attached by short green pedicels. Flowers are formed of six sepals and six petals, all similar in appearance, except that the outer sepals may have thin red stripes on the outside. Berries are blue, with a glaucous surface, and edible.

Creeping barberry can propagate itself by seed, rhizomes, stolons, and stem layering. As a result, this plant can spread in the landscape, though not aggressively. One of the advantages of creeping barberry is that it is tolerant of full sun, partial shade, and heavy shade. As a result it is a good option for dry, shady areas that are difficult for many plants.

Once established it requires minimal maintenance; primarily limited to trimming it back and cleaning up debris and litter than can get trapped in the leaves and stems. It is also resistant to deer and attracts pollinators Mahonia repens berrywhen in bloom.

Mountain Parsley

Cymopterus lemmonii is one of the yellow-flowered members of the large apiaceae family, for which white is a more common color. Occasional populations have red flowers, however. The inflorescence is flat-topped, formed of around a dozen stalklets, each bearing a group of tiny, five-lobed flowers, the tops of which which are folded in somewhat. Narrow, green, red-tipped bracts project out a little way below the flowers.

This species is found in a wide variety of habitats and elevations, resulting in a range of growth habits and leaf divisions; plants tall in the foothills, with relatively large leaves divided several times, but much shorter in the high mountains, with just a few, linear leaves. The overall flowering season is correspondingly long. The green fruits have pronounced ribs, or wings.

Intermountain Flora indicates, that this species has "great morphological variability and uncertain generic position.... Efforts to divide it into more narrowly limited species or biologically significant varieties have been unsuccessful". You can study the variability of Cymopterus lemmonii as you encounter it; for an extreme example, compare the montane plant at left with the alpine one in the last photo on this page.

The plant was first collected for science by Augustus Fendler outside Santa Fe in 1846 or 1847 and was named Thaspium montanum by Asa Gray in 1849; it was renamed Pseudocymopterus montanus by John Coulter and Joseph Rose in 1888. The most widely accepted name, Cymopterus lemmonii, was given by James Dorn in 1977 for a specimen collected in the Huachuca Mountains in Arizona in 1887 by John Lemmon, respected western United States collector.

Western Indian Paintbrush

Castilleja occidentalis is quite common in the upper subalpine and alpine zones in vicinity of Glacier National Park within northwest Montana. Disjunct populations are found in Colorado and New Mexico. Many reports from higher elevations in southwest Montana may be from appropriate habitat, but need to be verified. Hybridization or intergradation with other Castilleja species might result in mis-identifications. Threats have not been identified. Current information on locations, populations sizes, and threats are needed from observers that have carefully examined their plants with the appropriate botanical resources.

PLANTS: A short, hemi-parasitic, herbaceous perennial plant that arises from a branched caudex. Plants grow 5-20 cm tall and are multi-stemmed. Foliage is green with short hairs (glabrate to puberulent).

LEAVES: Arranged alternately on the stem. Leaves are green (occasionally reddish at base), narrowly lanceolate, 1–3 cm long, and usually entire along the margins. The lowest leaves are smallest. Leaves generally feature prominent veins and a puberulent surface.

INFLORESCENCE A dense, terminal, bracteate spike, usually less than 4 cm long. The inflorescence is viscid-villous. Bracts are yellowish-white to green, sometimes purplish-tipped, narrowly ovate, entire or with a pair of small lateral lobes. The calyx is 15–23 mm long with subequal primary clefts and rounded ultimate lobes of 1–3 mm long. The corolla is whitish, 18–25 mm long with the galea 5–9 mm long and the lower lip 2–4 mm long.

Yellow Stonecrop

Sedum lanceolatum subspecies lanceolatum. Synonym: Amerosedum lanceolatum. (Yellow Stonecrop). Crassulaceae (Stonecrop Family). The rich maroons and yellows of Yellow Stonecrop are easily spotted, for whether in the foothills or alpine, the plant commonly grows on open rock and gravel thriving in full sunlight and heat.

The tiny, bulbous-looking, red-purple fleshy leaves appear at first to be some scattered bits of fungus. Basil and stem leaves are about the same size and shape, appressed, and generally round in cross-section.

The plant elongates to about four inches and is topped by bright yellow buds and then flowers.

The Sedum genus was named by Linnaeus in 1753, and this species was moved to the genus Amerosedum by Löve in 1985. That move is rejected by almost all botanists. Edwin Greene collected the first specimens of this species for science in the Pikes Peak area of Colorado in 1820 and John Torrey named this plant Sedum lanceolatum in 1827. However, Meriwether Lewis collected this species June 5, 1806 in Idaho near Kamiah.

"Amerosedum" means "American Sedum" and "lanceolatum" describes the leaf shape, lance-like, i.e., broader at the bottom and tapering gradually and evenly to a point -- although leaves can also be elliptic to ovate. "Sedum" is from the Latin "sedo", "to sit," and refers to the fact that some species attach themselves to stones. The common name, "Stonecrop", could have one of several archaic word meanings: these Sedums are "the crop produced by stones" or they are "the top [i.e. the "crop"] of the stones".

Western Golden Ragwort

Golden Ragwort is a welcome sign of spring, covering swampy areas with bright yellow, from mid-March through early summer. The buds are purple, and open to display yellow disc and ray flowers, unusual for a member of the Aster Family — the rays are often white.

This native perennial grows 1-3 feet tall, with only a few deeply cut leaves on the stems. The leaves at the base of the plant are heart-shaped, in a large rosette. After the flowers fade, these leaves spread to form a nice ground cover, which will persist over most of the winter.

Growing naturally in bogs, wet woods, floodplains and meadows in eastern North America, Golden Ragwort occurs in every county in Virginia. The plant thrives in full shade with acid, rich soil, in zones 3 to 9. Because it spreads easily by seed and underground roots, it can form large colonies and will grow under trees where nothing else thrives.

In a woodland garden or a perennial border in the shade the masses of golden yellow look wonderful with Bluestar (Amsonia tabernaemontana) and Red Columbine (Aquilegia canadensis).

Small bees and flies that emerge early from winter homes are frequent visitors, feeding on nectar and carrying pollen to fertilize neighboring flowers. Among the insects, the green metallic sweat bee is more easily seen than the dull brown or black cuckoo bees and hoverflies.

Deer avoid Golden Ragwort since the leaves contain toxic chemicals.

Prairie Groundsel

Packera plattensis, commonly known as prairie ragwort or prairie groundsel, is a species of the genus Packera and family Asteraceae. It used to be placed in the genus Senecio.

Prairie groundsel is found throughout the tallgrass prairie region. It blooms fairly early for a prairie wildflower: from April to July depending on the climate.

It is easily confused with golden ragwort (Packera aurea) which has a hairless stem and heart-shaped basal leaves, and Senecio integerrimus, which has leaves that are mostly entire instead of fern-like, and much larger basal leaves.

Biennials or perennials, 20–60+ cm; rhizomatous and/or fibrous-rooted (bases erect to suberect), sometimes stoloniferous (mostly eastern populations). Stems 1 or 2–3, clustered, floccose-tomentose proximally and in leaf axils, otherwise sparsely tomentose or glabrescent.

Flowering mid Apr–early Jun(–mid Jul, north). Prairies, meadows, open wooded areas, along highways, railroads, around mining and construction areas, usually on limestone; 50–1800 m; Ont., Sask.; Ark., Colo., Ga., Ill., Ind., Iowa, Kans., La., Mich., Minn., Miss., Mo., Mont., Nebr., N.Mex., N.Dak., Ohio, Okla., Pa., S.Dak., Tenn., Va., Wis., Wyo.

Packera plattensis is abundant, widespread, and almost weedy. Putative hybrids with other species are known. Plants in mesic, remnant prairies in the east are sometimes stoloniferous.

Rocky Mountain Goldenrod

Solidago multiradiata is a species of goldenrod known by the common names Rocky Mountain goldenrod, northern goldenrod, and alpine goldenrod. It is native to North America, where it can be found throughout the northern regions, including Alaska and most of Canada (all 3 territories plus all provinces except Prince Edward Island, including territory north of the Arctic Circle. Its distribution extends through the western United States as far south as Arizona, New Mexico, and California. It is known mostly from the subalpine and alpine climates of high mountain ranges. Its habitat includes tundra and mountain meadows.

This is a perennial herb producing one or more decumbent or erect stems from a branching caudex. The stems vary in maximum length or erect height from 3 to 80 centimeters. The leaves are linear or lance-shaped, sometimes narrowing quite a bit at the bases to become spoon- or spatula-shaped. They measure up to 20 centimeters long at the base of the plant, and are smaller farther up the stem. They are mostly hairless but may have hairs lining the toothed or serrated edges. The inflorescence is a cluster of several flower heads, with clusters containing up to 100 heads. Each flower head contains many yellow disc florets and many narrow yellow ray florets each 3 or 4 millimeters long. The fruit is an achene a few millimeters in length. It is coated in rough hairs and usually has a pappus on the tip.

Giant Goldenrod

Giant Goldenrod (Solidago gigantea) Aster family (Asteraceae)

This perennial wildflower is 3-7' tall and largely unbranched, except at the apex, where the flowering stalks occur. The central stem is light green or pale purple, terete, glabrous, and sometimes glaucous. The alternate leaves are 3-5" long and 1/3–2/3" (8-17 mm.) across, becoming only slightly shorter while ascending the central stem. Sometimes there are leafy lateral stems that develop from the leaf axils of the central stem, but they are very short and insignificant. The alternate leaves are narrowly lanceolate to elliptic, slightly to sharply toothed along their margins, and sessile; each leaf tapers gradually towards its tip and base.

The upper surfaces of the leaves are medium to dark green and glabrous, while their lower surfaces are a slightly lighter shade of green and glabrous or nearly so (sometimes there are fine hairs along the major veins below). Each leaf has 3 veins (a central vein and 2 lateral veins) that are nearly parallel to each other.

The nectar and pollen of the flowerheads attract many kinds of insects, including bumblebees, long-horned bees (Melissodes, Svastra), Halictid bees, dagger bees (Calliopsis, Heterosarus), Andrenid bees, Syrphid flies, and wasps. Other insects have been observed to feed on the leaves and other parts of Giant Goldenrod.

Tall Butter-and-Eggs

Linaria vulgaris (Butter and Eggs). Spike-like raceme 3 to 6 inches long of irregular yellow and orange flowers, each ¾ to 1 inch long. The upper lip of each flower is divided into 2 lobes, the lower lip into 3, with a long narrow spur hanging down at the base that holds nectar.

The lips and spur are yellow; an orange palate projects from the center.

Leaves are up to 2½ inches long and 1/8 to 1/6 inch wide with pointed tips and no leaf stalk. Attachment is alternate, but they can be tightly packed along the stem so may appear opposite or whorled. Leaves are toothless; leaves and stems are hairless.

Butter and Eggs is an invasive species which has spread to more than half the counties in Minnesota. It tends to grow in clumps and spreads vegetatively as well as by seed. Its main blooming season is early to mid summer, but it's not unusual to find some patches blooming in late spring or early fall.

The flowers are very similar to Dalmatian Toadflax (L. dalmatica) but that species has broad leaves. Like several other species, Linaria has been moved from the Scrophulariaceae (Figwort) family to Plantaginaceae (Plantain).

The plant is widely naturalized in North America, where it is considered an invasive species. Because the flower is largely closed by its underlip, pollination requires strong insects such as bees and bumblebees (Bombus species).

Canada Goldenrod

Solidago canadensis, known as Canada goldenrod or Canadian goldenrod, is an herbaceous perennial plant of the family Asteraceae. It is native to northeastern and north-central North America and often forms colonies of upright growing plants, with many small yellow flowers in branching inflorescence held above the foliage. It is an invasive plant in other parts of the continent and several areas worldwide, including Europe and Asia. It is grown as an ornamental in flower gardens.

Solidago canadensis is a herbaceous perennial plant with stems that grow 2-4 feet and sometimes to 6 feet tall. It has a wide distribution with several varieties, which have significant variability. The lanceolate to broadly linear shaped leaves are alternately arranged on the stems. The leaves are 4-6" long and 1" wide. The stems have lines of white hairs, while the undersides of the leaves are pubescent. The leaves are often prominently toothed. The flowers have yellow rays and are arranged into small heads on branched pyramidal shaped inflorescences, flowering occurs from July to October. It has a rhizomatous growth habit, which can produce large colonies of clones. This goldenrod can be found growing on distributed sites, along dry road sides to moist thickets.

Common Mullein

Verbascum thapsus, the great mullein, greater mullein, or common mullein, is a species of mullein native to Europe, northern Africa, and Asia, and introduced in the Americas and Australia.

It is a hairy biennial plant that can grow to 2 m tall or more. Its small, yellow flowers are densely grouped on a tall stem, which grows from a large rosette of leaves. It grows in a wide variety of habitats, but prefers well-lit, disturbed soils, where it can appear soon after the ground receives light, from long-lived seeds that persist in the soil seed bank. It is a common weedy plant that spreads by prolifically producing seeds, and has become invasive in temperate world regions. It is a minor problem for most agricultural crops, since it is not a competitive species, being intolerant of shade from other plants and unable to survive tilling. It also hosts many insects, some of which can be harmful to other plants. Although individuals are easy to remove by hand, populations are difficult to eliminate permanently.

Although commonly used in traditional medicine, no approved drugs are made from this plant. It has been used to make dyes and torches. On flowering plants, the leaves are alternately arranged up the stem. They are thick and decurrent, with much variation in leaf shape between the upper and lower leaves on the stem, ranging from oblong to oblanceolate, and reaching sizes up to 50 cm long and 14 cm across (19 inches long and 5 inches wide). They become smaller higher up the stem, and less strongly decurrent down the stem.

Prairie Coneflower

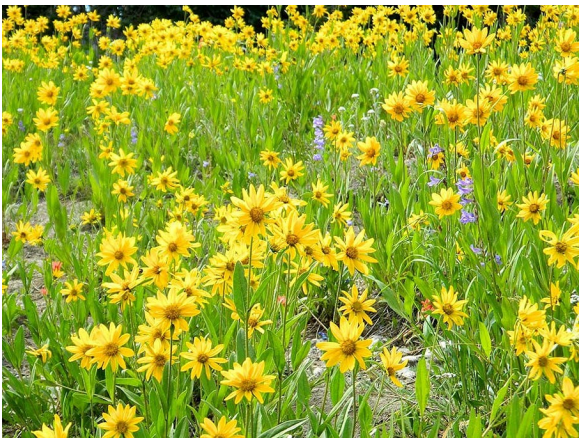
Ratibida columnifera (Prairie Coneflower). 1 to several long-stalked flower heads at the top of the stem and arising from the uppermost leaf axils. Flowers have 4 to 12 droopy, wide, bright yellow petals (ray flowers), notched at the tip, around an erect, cylindrical cone. Rays are occasionally deep red or yellow streaked with red. The cone is up to 1½ inches long and covered with hundreds of tiny brown or purplish disk flowers that bloom from the bottom of the cone up; the upper part of the cone not yet blooming is gray to gray-green. The bracts surrounding the base of the flower are in 2 layers, the outer linear and the inner shorter and broader. Flowers rise well above the leaves on ribbed stalks up to 12 inches long.

Leaves are up to 6 inches long and deeply divided, giving the appearance of compound leaves but are merely deeply lobed with 5 to 13 segments that are linear to lance-linear and may be further divided or shallowly lobed. Edges are mostly toothless, surfaces rough from stiff, appressed hairs. Stems are multiple from the base, mostly unbranched, rough-hairy, and leafy in the lower half.

The cone becomes a head of tiny, hairy, narrowly winged, brown seeds.

Notes: Prairie Coneflower is a smaller plant than most other yellow flowered coneflowers. Its cone is rather long compared to others, with the rays usually about as long as the cone where other coneflowers in Minnesota have rays much longer than their cone. While rays are typically yellow, there is also a variety or form pulcherrima that has dark red rays with yellow edges, commonly called Mexican Hat, that is readily available in the nursery trade.

Little Sunflower



Little Sunflower - Helianthella uniflora.

Plants of this species look like garden sunflowers but only grow a couple of feet tall and produce flowers only a couple of inches across. In fact, what most people consider to be the “flower” is really an inflorescence consisting of many tiny, individual flowers grouped into a head.

This species, like most members of the Aster family, produce two kinds of flowers: ray flowers along the outside that look like petals and disk flowers in the dark center. Each of these flowers contains male and female parts and produces a fruit containing a single seed.

Little Sunflowers grows in rocky areas at the top of meadow slopes. As the scientific name indicates, there is usually only one flower per stem which differentiates it from other similar species of yellow daisy such as Showy Goldeneye (Viguiera multiflora).

Little sunflower, also known as false sunflower, is an attractive perennial wildflower suitable for the woodland or shrubland garden, especially in drier climates. The one to several stems arise from 20-100 cm high from a woody base. The herbage is variable, consisting either of many minute hairs, many longer, stiff and spreading hairs, or occasionally lacking hairs. The lowest 1-2 pairs of leaves are opposite, while the upper ones are alternate.

The leaves are rough to the touch with 3 nerves or main veins in the blade. They range up to 15 cm long and up to 5 cm wide and are lanceolate to elliptical in shape. The lower leaves are more oblanceolate and smaller than the upper leaves.

Black-Eyed Susan

Black-eyed Susans (Rudbeckia hirta) are native to North America and one of the most popular wildflowers grown. They tend to blanket open fields, often surprising the passerby with their golden-yellow beauty.

Members of the aster family, Asteraceae, the “black eye” is named for the dark, brown-purple centers of its daisy-like flower heads. The plants can grow to over 3 feet tall, with leaves of 6 inches, stalks over 8 inches long, and flowers with a diameter of 2 to 3 inches.

Butterflies, bees, and a variety of insects are attracted to the flowers for the nectar. As they drink the nectar, they move pollen from one plant to another, causing it to grow fruits and seeds that can move about easily with the wind.

These plants bloom from June to October. Note that they can be territorial in that they tend to squash out other flowers growing near them.

Black-eyed Susans are good for cut flowers; they also work well for borders or in containers.

Plant black-eyed Susans when the soil temperature has reached 70°F for best seed germination. In many parts of North America, the planting period is March to May. The flower will flower June to September. Germination takes 7 to 30 days.

Plant seeds in moist, well-drained soil.

These hearty flowers really enjoy the Sun. They prefer full sun, though they’ll grow in partial sun.

Blanketflower

Gaillardia, also known as blanket flower, is an easy to grow, short-lived perennial with richly colored, daisy-like flowers.

There are over two dozen species in the Gaillardia genus and most are native to some area of North America.

Gaillardia pulchella, which is native from the southeastern U.S. through to Colorado and south into Mexico, was cross-bred with Gaillardia aristata, a prairie flower, to create Gaillardia X Grandiflora, which is the most common garden form.

Gaillardia forms a slowly spreading mound and the common name may be a reference to how they can slowly spread and "blanket" an area. The flower can reseed and sprawl through the garden. Since the original plants are hybrids, expect some variation from self-seeding.

The genus Gaillardia was dedicated in 1788 in honor of the early French botanist Gaillard de Charentonneau. Aristata means "bearing bristles" in botanical Latin, in reference to the rough hairy leaves and stems.

Botanist Frederick Pursh described this species for science in his monumental Flora Americae Septentrionale published in 1814.

A moth (Schinia masoni) camouflages itself for protection on the heads of blanketflower - the head and thorax of the moth blend with the ray flowers, while the crimson wings blend with the disc flowers.

Nodding Sunflower

Nodding Sunflower, Helianthella quinquenervis, is commonly known as the Aspen sunflower, though it is referred to by other common names such as the little sunflower. Because each leaf has five prominent veins, H. quinquenervis is also called the Five-Nerved or Five-Veined Sunflower. Helianthella quinquenervis is just one of eight herbaceous perennial sunflower species in the genus Helianthella.

Habitat: H. quinquenervis occupies mountainous regions in many habitats (aspen, lodgepole pine and ponderosa pine forests as well as open meadows, wetlands and bogs). Specimens have been collected throughout the western United States, including AZ, CO, ID, MT, NM, NV, OR, SD, UT and WY. Its range extends south to Chihuahua and Nuevo Leon, Mexico.

Before flowering begins, the Aspen sunflower begins to secrete extrafloral nectar, which is rich in sugar and amino acids. Since the plant has no natural chemical or physical defenses, the nectar attracts ants including some species from the genus Formica, to protect flower heads from pre-dispersal seed predation. Male and female tephritid flies meet on H. quinquenervis for courtship and mating. The female lays her eggs between the bracts of the unopened flower head. When the eggs hatch, the fly larvae feed on the seeds. The ants collect the nectar produced by H. quinquenervis and patrol the stalks while they are waiting for more nectar to be secreted.

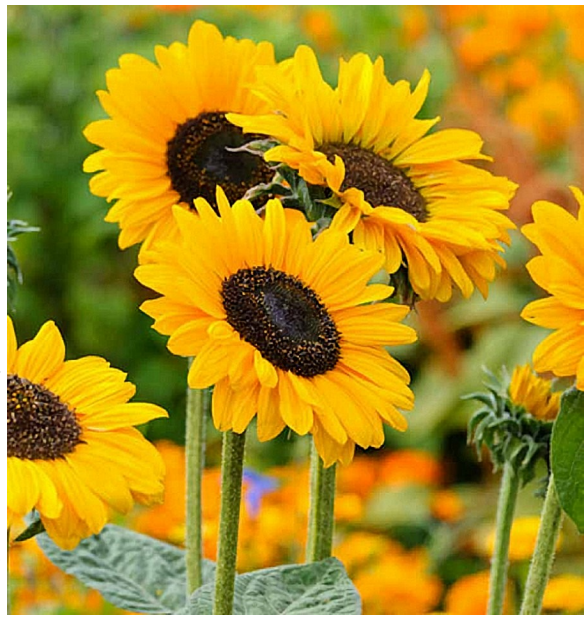
Yellow Pond Lily

Nuphar lutea, the yellow water-lily, brandy-bottle, or spadderdock, is an aquatic plant of the family Nymphaeaceae, native to northern temperate and some subtropical regions of Europe, northwest Africa, western Asia, North America, and Cuba. This interesting species found on both sides of the Atlantic Ocean was used as a food source and in medicinal practices from prehistoric times with potential research and medical applications going forward.

Nuphar lutea flowers emerge about three years after seed germination, blooming mid-spring through early autumn, each flower taking 4 to 5 days to develop—a process incorporating secretion of a sweet-smelling nectar on the stigma, pollen cross-fertilization by a host of insects (bees, beetles, flies, aphids), expansion of the female reproductive parts (gynoecium) up to three times in diameter, birthing as many as 400 seeds, and finally dispersal of the seeds on the water surface as the seed-head bursts, spreading them up to 80 m/h (meters/hour) over a 72-hour period before they sink to the bottom.

The flower is solitary, terminal, held above the water surface; it is hermaphrodite, 2–4 cm diameter, with five or six large bright yellow sepals and numerous small yellow petals largely concealed by the sepals. Flowering is from June to September, and pollination is entomophilous, by flies attracted to the alcoholic scent. The flower is followed by a green bottle-shaped fruit, containing numerous seeds which are dispersed by water currents. Native people gathered the thick rootstocks in winter and spring, boiled or roasted them for several hours, then peeled them to expose their sweet, gluey contents. Rootstocks were also sliced, dried and ground into meal or flour. The starchy seeds can be difficult to remove, so the tribes rotted the fruits until the pods became soft. The heated seeds swell like poor-quality popcorn, making a crunchy snack.

Common Sunflower



Common sunflower is a member of the Asteraceae, the Sunflower family. In older manuals and guides, this family is called the Compositae because the 'flowers' are a composite of many flowers, often of different types. The many species of plants in this family are grouped based on the arrangement and type of flowers. All members of the family produce one or more heads (capitulum, the term used in technical keys) of flowers. This and other sunflowers have two different types of flowers, ray flowers and disk flowers and in turn, these can have male and female parts, or either one or the other. The ray flowers look like petals, but each is actually an individual flower. The disc flowers are at the center of the head, inside the ring of ray flowers. The disc flowers are usually small. With a hand lens one can see the distinct tips of 5 petals in each flower. The disc flowers closest to the ray flowers open first. There are 52 species of sunflowers, all native to North America and Mexico.

This sunflower is 1 to 3 meters (ca. 39 to 118 inches) tall (cultivated forms often taller). The stem is stiff, and usually coarsely hairy, often more than 2.5 centimeters (1 inches) in diameter. Leaves are mostly alternate, wider at the base than the top, and are 10 to 40 centimeters (4 to 15.75 inches) long by 5 to 40 centimeters (2 to 15.75 inches) wide. The leaves are toothed and covered in short, rough hairs above. Single heads are borne at the end of branches. Each head generally has 13 to 30 ray flowers that are 2.5 to 5 centimeters (1 to 2 inches) long, and 150 to more than a thousand-disc flowers. Both the ray and disc flowers are yellow (reddish rays in some cultivated forms).

Roundtip Twinpod

Physaria is a genus of flowering plants in the family Brassicaceae. Many species are known generally as twinpods, bladderpods, or lesquerella. They are native to the Americas, with many species endemic to western North America. They are densely hairy annual and perennial herbs often growing prostrate or decumbent, along the ground in patches or clumps. They bear inflorescences of bright yellow flowers. The fruit is often notched deeply, dividing into twin sections, giving the genus its common name.

Bladderpod oil is extracted from the seeds of Physaria fendleri and certain other species in the genus.

Due to the presence of both annual and perennial herbaceous members, this genus has been used as a model for allocation pattern comparisons between the annual and perennial life cycle.

Many of species of Physaria were formerly included in the now-defunct genus Lesquerella.

It grows in round clumps, with its gray-green leaves arranged like a rosette in the middle surrounded by a ring of yellow flowers. The name "twinpod" comes from the seed pods that look like two green marshmallows shoved together.

The plants flower in April and May; and the seed pods show up in July.

Endemic to the foothills of the Northern Front Range in Jefferson, Boulder and Larimer Counties. Grows at elevations between 5,200 and 5,800 feet in dry, loose, shales and limestones of the Niobrara Formation.

Alpine Paintbrush

Castilleja Rhexifolia, Alpine Paintbrush. Castilleja rhexifolia produces flower heads in a range of beautiful colors, including rich shades of orange, yellow and purple (often dark at the base and light, or even white towards the tip), but most are salmon pink; hybridization is thought to be responsible for some of the variation.

The bracts (which may be split into three lobes - a large central lobe and two small side lobes) and stem are quite hairy, the leaves less so. The elongated green leaves have three prominent lengthwise veins.

These plants are hemiparasites, meaning that although these plants are green and can photosynthesize, they also have the ability to sequester nutrients from other organisms, in this case, from perennial grasses. However, like most red flowers, this species is especially adapted for pollination by hummingbirds. Hummingbirds have long bills that allow them to reach the nectar rewards at the end of long, tubular flowers. Also, the lack of a lower petal lip denies insects a perch to rest on, favoring hovering organisms like bees and hummingbirds.

This is a biennial species. Although seeds can germinate the same season as when they are released, usually they germinate the following spring and produce a basal rosette that will flower the following season. Ironically, this plant was used by Native Americans as both a love charm in food and as a poison used to against their enemies, as this species is known to have toxic properties. This species likes sand and grows in both prairies and open woods. It is present in most of the eastern states, including those bordering the Mississippi River, as well as Texas, Oklahoma, and Kansas.

Dwarf Paintbrush

This beautiful, compact growing, evergreen Scadoxus has spirally arranged leaves and striking red flowerheads that resemble a paint brush, surrounded by notable petal-like spathes, so that the whole resembles a large flower.

Scadoxus membranaceus is the smallest of the known Scadoxus species, entirely evergreen and low growing, its height varies from 150–400 mm, depending on the form. This species is notable for its large spathes that surround the flowers, giving the flowerhead the appearance of a large flower. It grows from a bulb where 3 to 4, thin layers of leaves will appear. The leaf stalk is 80–150 mm long and the leaf blade is lanceolate and 100–150 mm long . The leaves and inflorescence are completely different from the other species, in that they are not produced from the pseudostem, but arise directly from the rhizomatous rootstock.

It bears greenish to pale red flowers in spring, right through summer to mid-autumn (December to mid-April). The tepals (outer parts of the flower) are fused at the base, forming a tube as long as the length of the flower. The stamens are longer than the flowers and protrude from the tube. The flowers are about 38 mm long and are born in an umbel (arising from a common point), on a long stem that bears no leaves. The umbel is enclosed by bracts which are the same height as the flowers. The bracts are present throughout flowering and fruit set. The flowers bear bright red berries.

Generally, the genus Scadoxus is known to have some species that are toxic, that contain poisonous alkaloids. These are believed to be very dangerous to animals, such as sheep and goats and can lead to death. Some of these species were used as fishing poisons.

Blacktip Ragwort

General: Sunflower family (Asteraceae). Tall blacktip ragwort is a perennial, subrhizomatous forb from a branching caudex. The plants have an erect growth habit and reach a mature height of 20 to 80 cm (8 to 32 in). The leaves and stems are densely hairy causing the herbage to appear grayish. The leaves are oblanceolate, 8 to 30 cm (3 to 12 in) long and 1 to 4 cm (0.4 to 1.6 in) wide. The leaf margins are dentate to nearly entire. The inflorescence is a compact cluster of 15 to 60 floral heads.

The bracts are green to brownish with black tips. The fruit is an achene bearing a white pappus (Welsh et al 2003).Distribution: Tall blacktip ragwort is found in the Rocky Mountain regions of Utah, Wyoming, Colorado and New Mexico.

Habitat: Tall blacktip ragwort is found in montane plant communities from 2,400 to 3,600 m (7,800 to 11,800 ft). It is commonly associated with aspen, spruce-fir, mixed conifer and tall forb communities.

Many members of the genus Senecio are known to contain toxic alkaloids which can cause liver disease in livestock and humans. The toxic alkaloids are transferred from the host to the paintbrush via specialized root structures called haustoria which form the connection between the parasite and host plant.

Arrowleaf Ragwort

Senecio triangularis, known as arrowleaf ragwort, arrowleaf groundsel and arrowleaf butterweed, is a species of the genus Senecio and family Asteraceae.

It is similar in form to Senecio serra, both being four feet tall, have narrow and serrated leaves, and are topped with many small, yellow sunflowers. but S. triangularis is more common than S. serra. S. triangularis has single erect stems, reaching up to 10–120 cm (4–47 in) tall.

The stems have evenly distributed leaves. The leaves are triangular, with tapered ends, hence the name. The flowers have a prominent central dome, with ray florets around 8 cm wide.

As some plants are diploid, meaning having two sets of chromosomes, this can be used to Identify hybrids and classification of groupings. It has been counted as 2n = 40, 80. It is native to temperate regions of America[7] and is reportedly poisonous to animals.It has the common names of arrowleaf ragwort, arrowleaf groundsel, and arrowleaf butterweed.

In the early 1830s, Scottish botanist Thomas Drummond collected this plant, probably on his second trip to the United States. The plant was named by William Hooker, Drummond's mentor, and first published and described by Hooker in 'Flora Boreali-Americana' (Fl. Bor.-Amer.) Vol.1 on page 332 in 1834.

It grows in open woodlands, (mainly coniferous forests) and on rocky stream sides. They can grow at altitudes of between 100 to 3,500 m (330 to 11,480 ft).

Brackted Lousewort

The stout, unbranched, light green stems of pedicularis bracteosa are usually about 2 feet tall, though they can exceed 3 feet. Leaves are fern-like in appearance, divided into pairs of dark green leaflets; at the base and at wide intervals along the stem.

The central stalk is colored lighter green. Basal leaves are often withered at flowering time.

The dense, narrow inflorescence extends across the upper half of the stem - up to 12 inches. The tubular flowers are pale yellow, sometimes with purplish tints, and they open to two lips; the upper is hooded, arching downwards, while the lower is straight, and shorter.

The corolla is around one inch long. Flowers become light brown as they wither. Flowers are subtended by hairy, lance-shaped bracts. Flowers open from the base of the cluster upwards.

Pedicularis procera is a similar species, somewhat taller, and differentiated by the presence of red veins on the flowers and bracts.

There are eight varieties of pedicularis bracteosa, the majority restricted to the Pacific Northwest, and differing mainly in the petal and sepal characteristics; var paysoniana is the most widespread variant.

Smooth Goldenrod

Stems: It grows from 1 to 6 plus feet high. The stem is unbranched below the floral array, smooth throughout but within the floral array there may be sparse short stiff hair. In full sun stems can be reddish in color.

Leaves are all stem leaves, alternate, lance shaped with sharp teeth on the margins, tapering to a pointed tip and tapering to the stem; larger leaves with two noticeable veins parallel to the mid-rib, all 3 rising from the base. Upper stem leaves may be without teeth. Most leaves are sessile (stalkless). The lowest leaves usually wither by flowering time. Mid-stem leaves are the largest, 3 to 5 inches long, then decreasing in size into the floral array. The underside of the leaf may have hair on the main veins and nerves or can be otherwise smooth, but is much paler in color.

The floral array is a spreading pyramidal cluster of arrays at the top of the stem with the flowers on one side of each branch of the array; these branches tend to recurve backward (downward), particularly the lower branches of the array. The branches may have fine hair or be smooth.

Flowers: The yellow flower heads are bell shaped, less than 1/4 inch across, composed of two types of florets: 9 to 15 tiny pointed ray florets, with yellow rays, which are pistillate and fertile, and 7 to 12 disc florets with yellow corollas whose lips are pointed and erect to spreading during pollination. These are bisexual and fertile. The disc florets have 5 stamens with yellow filaments and anthers. The anthers surround and are appressed to the style. Anthers turn darker at pollen maturity. The thin phyllaries are greenish to yellow-green in color and these surround the flower head in 3 to 4 series of unequal size. The outer series lanceolate in shape with pointed tips and the inner series more linear with tips less pointed.

Yellow Sweet Clover

Melilotus officinalis, known as sweet yellow clover, yellow melilot, ribbed melilot and common melilot, is a species of legume native to Eurasia and introduced in North America, Africa, and Australia.

Melilotus officinalis can be an annual or biennial plant, and is 4–6 feet (1.2–1.8 m) high at maturity. Leaves alternate on the stem and possess three leaflets. Yellow flowers bloom in spring and summer and produce fruit in pods typically containing one seed. Seeds can be viable for up to 30 years. Plants have large taproots and tend to grow in groups. Plants have a characteristic sweet odor.

M. officinalis is native to Europe and Asia and has been introduced to North America as a forage crop. It commonly grows in calcareous loamy and clay soils with a pH above 6.5 and can tolerate cold temperatures and drought; it does not tolerate standing water or acidic soils, with a pH of 5.5 as the plant's lowest limit. Common places where it can be found include open disturbed land, prairies, and savannahs, and it grows in full or partial sunlight. It is an invasive species in areas where it has been introduced, especially in open grasslands and woodlands where it shades and outcompetes native plant species.

Sweet clover contains coumarin that converts to dicoumarol, which is a powerful anticoagulant toxin, when the plant becomes moldy. This can lead to bleeding diseases (internal hemorrhaging) and death in cattle. Consequently, hay containing the plant must be properly dried and cured, especially in wet environments.

Anemone Globosa

Common names: Anemone globosa, Anemone hudsoniana, Anemone multifida ssp. globosa, Anemone multifida var. globosa, Anemone multifida var. hudsoniana, Anemone multifida var. nowasadii, Anemone multifida var. richardsoniana, Anemone multifida var. sansonii.

This attractive anemone is difficult to distinguish from Drummond's Anemone (A. drummondii). The latter is usually shorter and more cushion-like, less hairy, and with single flowers per stem possible. The former is taller, with two flowers per stem possible.

The basal leaves are divided into several elliptical leflets. The basal leaves also have long petioles. A whorl of leaves is found at midstem in addition. These latter stem leaves lack the long petioles.

The flowers are actually five white to purplish, or occasionally orange or red sepals. Petals are lacking. The yellow stamens and greenish pistils are centrally located and both are numerous. The fruits are silky plumes attached to a single achene. This arrangement allows for wind dispersal of the seeds.

This is a fine wildflower for the rock garden, and seems to be very hardy in lowland, west of the Cascades gardens.

Anemone globosa, Cliff Anemone is found in varied habitats, from open, exposed ridge tops, to open forests.

Brook Primrose

Brook Primrose. Plants 15-50 cm, herbaceous; rhizomes short, stout; rosettes often clumped; vegetative parts efarinose. Leaves rankly aromatic, indistinctly petiolate; petiole broadly winged; blade without deep reticulate veins abaxially, broadly lanceolate or oblanceolate to oblong-obovate, 1-33(-40) × 1.5-7 cm, thick, margins almost entire or remotely denticulate, apex rounded to acute, surfaces glabrous. Inflorescences 5-25-flowered; involucral bracts plane, unequal.

Flowers heterostylous; calyx green, often purple tinged, cylindric to campanulate, 8-15 mm; corolla magenta, tube 5-20 mm, length 0.9-1 times calyx, with prominent glands basally and distally, limb 10-25 mm diam., lobes 5-12 mm, apex emarginate. Flowering summer. Subalpine bogs, streamsides, wet meadows; 2700-4200 m; Ariz., Colo., Idaho, Mont., Nev., N.Mex., Utah, Wyo.

Primula parryi has the largest and most showy plants of the native North American primroses, growing to almost 50 centimeters in protected sites. It is common on subalpine streamsides and also occurs on the alpine tundra in wet areas near snowmelt seeps. The strong skunky odor of this species is unique in the North American primroses, often lingering even on herbarium specimens. It is the most common species of the genus in the western United States.

Ecology: Alpine and subalpine meadows, springs, streambanks, ledges, rocky outcrops, mixed conifer forests; 2900-3700 m (9500-12000 ft); Apache and Coconino counties; western and southwestern U.S. Notes: Some find this plant to be malodorous, especially when it occurs in large patches.

Cactus

The color red is one of the most impactful and eye-catching colors out there. We expect to see it in flowers, but it is rare in the succulent family, especially in cactus.

The Beauty of Cactus Flowers When you look at a cactus, it's hard to imagine anything beauty growing from it's unattractive exterior. But cactus flowers are some of the most gorgeous flowers on Earth. Their vibrant colors and blooms are eye catching and alluring, adding a feminine touch to the cactus' thorny outside. In the dry desert where beauty is categorized by the dirt, sand and cacti, a different kind of appeal blooms on thorns. Each desert area's elevation, soil, patterns of precipitation and more all combine to influence the type of floral growth on cacti, which is what gives these desert regions color. Cactus flowers are both large and showy. They are unique flowers because they have tons of petals and stamens instead of the usual five to 10 that are found on traditional flowering plants.

Cactus flowers have several meaning. Their can symbolize sexual attraction or lust between two people and also signify the loneness of the desert. Since it blooms in harsh conditions, cactus flowers also symbolize the power of enduring all things, no matter how hard they are. Cactus flowers also mean protection from threats, warm and care (from a mother to a child) and abstinence and chastity. While other flowers have fancy names, cactus flowers are named because they bloom on cactus plants. There are also many traditions using cactus flowers. In Japan, the tradition of Hanakotoba is giving the gift of cactus flowers as a way to signify that you are sexually attracted to someone.

Common Blanketflower

Gaillardia aristata is a North American species of flowering plant in the sunflower family, known by the common names, common blanketflower and common gaillardia. This perennial wildflower is widespread across much of North America, from Yukon east to Québec and south as far as California, Arizona, Illinois, and Connecticut, although it may be naturalized rather than native in parts of that range. It is also naturalized in scattered locations in Europe, Australia, and South America.

Gaillardia aristata grows in many habitats. It is a perennial herb reaching maximum heights of anywhere between 20–70 cm (8–28 in). It has lance-shaped leaves near the base and several erect, naked stems holding the flowers.

Each flower head has a center of brownish or reddish purple disc florets and a fringe of ray florets which are about 10–30 mm (0.4–1.2 in) long and yellow to reddish with dark bases.

The fruit is a stout, hairy achene which may be over a 10 mm (0.4 in) long including the long, spiky pappus.

Some Plateau Indian tribes used blanketflower to treat wounds and settle fevers.

Gaillardia aristata is a widely cultivated ornamental plant, used as a perennial garden flower.

Scarlet Gilia

Scarlet gilia, aka Fairy Trumpet or Skyrocket has been known to modern science since 1806, when western explorers Lewis and Clark collected the first specimen along the Lolo Trail in the mountains of northern Idaho. This is a striking plant, with bright green, comb-like leaves and an elongated inflorescence of red, pink, or white flowers. Each flower forms an elongated tube that bursts into five spreading corolla lobes at the tip. Surprisingly, taxonomists have had a difficult time deciding just what scientific name to give it. Starting with the original name of Cantua aggregata given by Frederick Pursh, scarlet gilia has been assigned to no fewer than eight different genera in the phlox family (Polemoniaceae). Extremely variable across its broad range (southern British Columbia to Montana south to northern Mexico), taxonomists have named at least 27 different forms of scarlet gilia as separate species. Today, these are all recognized as just one to three species (again, depending on the taxonomic treatment) with 7-10 different subspecies. Most authorities now know the species as Ipomopsis aggregata (Ipomopsis comes from Greek words for “striking appearance”), though older books often treat it as Gilia aggregata (for Spanish botanist Felipe Luis Gil).

Scarlet gilia grows in a variety of habitats, from desert canyons and cliffs to montane meadows, and subalpine rock fields. These plants are relatively short-lived and often die after flowering. In many instances, individuals will persist for one to several years in rosette form, consisting only of a basal clump of deeply pinnately lobed leaves. Flowering stalks are highly edible to native wildlife and livestock, but plants can compensate for herbivory by sending up new shoots and branches.

Veiny Dock

Rumex venosus is a species of flowering plant in the knotweed family known by the common names veiny dock, winged dock, and wild-begonia (it is not related to genus Begonia). It is native to central and western North America, from southern parts of the Canadian prairies, through to Mexico.

It can be found in many types of habitat, including sagebrush, dunes, and other sandy areas. It is commonly found in heavily grazed pastures as livestock tend to avoid it, allowing veiny dock to spread uninhibited.

The light green leaves are lance-shaped to oval with smooth or wrinkled edges, growing 5-10 centimeters long and 1-6 centimeters wide. The inflorescence grows as either an axillary or terminal panicle and is densely flowered. The flowers themselves are not showy, being green and inconspicuous. They have 6 sepals, 6 stamen, and 1 pistil. The bright, pink colour of the flowers comes from the inner sepals of each flower when the fruit matures. The sepals enlarge to about 1.5 centimeters across, turning quite veiny, and surround the achene. Flowering period is throughout the summer.

The leaves have been used to relieve the burning of stinging nettle, and can be dried and used as a powder to help speed the healing of wounds. Docks contain anthraquinones, which have laxative and antibacterial properties, as well as stopping the growth of some parasites and fungi. There is also evidence that Native Americans used the roots to make an orange dye. The roots were also mashed for use as a poultice.

Western Red Columbine

Aquilegia elegantula, western red columbine. The western red columbine occurs in southeastern Utah into southwestern Colorado south into New Mexico and extreme northeastern Arizona.

As with all the red flowered columbines, Aquilegia elegantula is one of the first wildflowers available for hummingbirds to gather nectar from in the spring.

Aquilegia elegantula ranges in height from 10 to 60 cm. The foliage is green and the leaves are green, glabrous above, glaucous, and glabrous below. The flowers nod and are the narrowest of the red columbines. The sepals are yellowish green at the tips becoming red towards their base, 7 to 10 mm long and straight to barely spreading.

The blades are yellow, 6 to 8 mm long. The spurs are red, straight, 16 to 24 mm long, and broad at the base, abruptly narrow in the middle and bulging at the tip. The stamens extend beyond the blades.

The genus name Aquilegia comes from the Latin aquila which means eagle and refers to the spurred petals that many believe resemble an eagle's talons. The species name formosa, Latin for "beautiful," aptly describes this large plant, especially when it has hundreds of lovely flowers nodding over it.

There are other species with mostly red flowers, which also attract hummingbirds as pollinators. The nectar was eaten as a candy by the Gitxsan and Wet'suwet'en peoples.

Aquilegia elegantula is found growing in moist coniferous forests and along streams.

Wine Cup

Wine Cup, commonly known as Poppy Mallow or Wine Cups, Callirhoe involucrata is a native wildflower that decorates the garden with a summer-long display of bright magenta-pink flowers. A sprawling grower, Callirhoe involucrata's long branches spread out across the ground to create a colorful mat of flowers and foliage. Drought resistant perennial plant (xeric).

Purple poppy-mallow's stems sprawl along the ground up to 3 feet, forming a thick mat up to 1 foot tall. Rounded, hairy leaves are deeply lobed and cleft. The chalice-shaped, 1 1/2-2 1/2 in. wide flowers have a white spot at the base of their five, maroon petals. Flowers, which are borne on long, axillary stalks, close in the evening, open in the morning and remain closed after pollination.

Winecup wildflowers are named for the masses of pink, maroon, or reddish-purple, cup-shaped blooms, each with a white spot at the center of the "cup." The flowers, which open in the morning and close in the evening, are borne on the end of the stems.

The numerous trailing stems spread vinelike over the ground originating from a carrot-like tuber. The magnificent dark purple-redor wine colred flowrs are numerous found at the end of slender stems. The flowers close each evening and remain permanently shut after polination. The stems and leaves of the entire plant die back in the heat of summer and should be trimmed to promote fall growth. Easy to grow from seed, or can be started from the carrot-like tuber. Prefers full sun in gravelly or sandy soils.

Red Clover

Common Names: red clover, cow clover, meadow clover, wild clover. Like peas and beans, red clover belongs to the family of plants called legumes.

Red clover contains substances called isoflavones. Isoflavones are phytoestrogens—compounds similar to the female hormone estrogen.

Historically, red clover was used for asthma, whooping cough, cancer, and gout. Today, extracts from red clover are most often promoted for menopause symptoms, high cholesterol levels, or osteoporosis.

Trifolium pratense, the red clover, is a herbaceous species of flowering plant in the bean family Fabaceae, native to Europe, Western Asia, and northwest Africa, but planted and naturalised in many other regions.

It is widely grown as a fodder crop, valued for its nitrogen fixation, which increases soil fertility. For these reasons, it is used as a green manure crop. Several cultivar groups have been selected for agricultural use, mostly derived from T. pratense var. sativum.

It has become naturalised in many temperate areas, including the Americas and Australasia as an escape from cultivation.

Due to its beauty, it is used as an ornamental plant. Red clover's flowers and leaves are edible, and can be added as garnishes to any dish. They can be ground into a flour.

Queen’s Crown

Rhodiola rhodantha, common name redpod stonecrop or queen's crown, is a perennial flowering plant in the family Crassulaceae. This species is present in the United States (Arizona, Colorado, Montana, New Mexico, Utah, and Wyoming). It is native to the Rocky Mountains, at an elevation up to 12.000 ft above sea level.

Rhodiola rhodantha can reach a height of about 45 centimetres (18 in). These plants have small, lanceolate and succulent leaves without petiole. They are green at the bottom of the plant whereas at the top they are reddish. The flowers are hermaphrodite, may be rose or reddish and form an inflorescence. They bloom from July to August and the seeds ripen from August to September.

Rhodiola rhodantha is a succulent plant, with thick, fleshy leaves growing close together in a regular arrangement all along the stem; those towards the upper end turn bright red as they mature, starting at the edges, while all become red as they start to wither. Stems are topped with a rounded cluster of red or pink flowers; each has 5 or 6 small petals, pointing upwards, surrounded by the same number of pointed sepals. Inside are reddish stamens with dark purple tips, and a split stigma, while underneath are reddish bracts.

Pinedrops

Woodland pinedrops is a tall, reddish-purple plant with a sticky, unbranched stem. It has small, white to pink, urn-shaped flowers which hang upside-down. The leaves are small and scale-like, mostly on the lower stem, also purplish.

Following flowering in mid to late summer, the stems become quite woody and stiff, making an interesting dried flower.

Pinedrops is a member of the Indian-pipe family (Monotropaceae). Pinedrops is a root parasite, depending on its association with a mycorrhizal fungus that is also associated with a pine tree. Pinedrops produces very little chlorophyll and is therefore not green in color and does not conduct photosynthesis.

Pinedrops is primarily a western species, with disjunctive locations in the Black Hills and Great Lakes area, and scattered sites in Quebec and New England. It typically occurs in small populations and individual pinedrops plants may not appear above ground every year. It usually occurs in conifer forest or mixed conifer-hardwood forest.

Pinedrops is listed as threatened in Michigan, and endangered in New York, Vermont, and Wisconsin. Reasons for its rarity include typically small population sizes; short-lived seeds; variable occurrence and dormancy at a given site; and association with specific fungal and conifer partners.

Pinedrops seeds are difficult to germinate and establish, and plants do not transplant well. This woodland oddity is best enjoyed where one finds it.

Prince’s Pine

Chimaphila umbellata, the umbellate wintergreen, pipsissewa, or prince's pine, is a small perennial flowering plant found in dry woodlands, or sandy soils. It is native throughout the cool temperate Northern Hemisphere.

It grows 10–35 cm tall, and has evergreen shiny, bright green, toothed leaves arranged in opposite pairs or whorls of 3–4 along the stem. Leaves have a shallowly toothed margin, where the teeth have fine hairs at their ends. The flowers are white or pink, produced in a small umbel of 4–8 together.

Although it has green leaves year-round, it receives a significant portion of its nutrition from fungi in the soil (that is, it is a partial myco-heterotroph, which is not surprising as related plants, such as Pyrola, are partial or full myco-heterotrophs).

Some Plateau Indian tribes used a boil of prince's pine to treat tuberculosis.

The twentieth century Appalachian folk healer Clarence "Catfish" Gray, "Man of the Woods", credited pipsissewa with curing his own heart problems and included it in his 15 herb cure-all "bitters."

It is used as a flavoring in candy and soft drinks, particularly root beer.

The roots and leaves of Chimaphila umbellata can be boiled to create tea.

"Pipsissewa" is a Cree name meaning "It-breaks-into-small-pieces".

Showy Milkweed

Showy Milkweed (Asclepias speciosa) is similar in form to Common Milkweed but less aggressive, making it more manageable in a garden setting. About 3 feet high, it features large oval leaves, and spikey pink flower clusters atop thick stems.

The very fragrant blooms give way to prominent 2 - 3 inch long seed pods and the leaves turn bright Gold in the fall.

Native to the western U.S. and upper Midwest, Showy Milkweed tolerates a variety of soil types and conditions and is very drought tolerant. Monarch butterflies lay their eggs exclusively on plants in the Asclepias genus, otherwise known as milkweeds. You're sure to see Monarchs when you plant milkweeds.

A stout, sparingly branched, pubescent perennial, 1 1/2-3 ft. tall, with large, oval, blue-green leaves and showy, spherical clusters of rose-colored flowers. Flowers occur at the top of the stem and on stalks from leaf axils. A grayish, velvety plant with erect leafy stems and with umbels of star-like pinkish flowers in upper axils and at top. Sap milky.

This species is closely related to the Common milkweed, A. syriaca, with which it sometimes hybridizes at the eastern limits of its distribution.

These species are similar in appearance and growth form (tall and robust), but can be distinguished by the layer of fine white hairs on A. speciosa and flowers that look like small crowns.

Unlike A. syriaca, A. speciosa does not form large clones.

Fireweed

Fireweed is a tall showy wildflower that grows from sea level to the subalpine zone. A colorful sight in many parts of the country, fireweed thrives in open meadows, along streams, roadsides, and forest edges. In some places, this species is so abundant that it can carpet entire meadows with brilliant pink flowers.

The name fireweed stems from its ability to colonize areas burned by fire rapidly. It was one of the first plants to appear after the eruption of Mt. St. Helens in 1980. Known as rosebay willowherb in Great Britain, fireweed quickly colonized burned ground after the bombing of London in World War II, bringing color to an otherwise grim landscape. Fireweed is the official floral emblem of the Yukon Territory in Canada.

A member of the Evening Primrose family (Onagraceae), taxonomists previously included fireweed in the Epilobium (willowherb) genus, but it is now placed in the Chamerion (fireweed) group. The Evening Primrose family contains about 200 species worldwide.

Fireweed was important to native people around the world. Choice patches of fireweed were even owned by high-ranking families in British Columbia. Tea was made from the leaves. High in vitamins A and C, fireweed shoots provided a tasty spring vegetable. Flowers yield copious nectar that yield a rich, spicy honey. Today, fireweed honey, jelly, and syrup are popular in Alaska where this species grows in abundance.

Bush Morning Glory

Common Names: bigroot morning-glory, bigroot bush, morning-glory, man root, man-of-the-earth, bush moonflower, wild potato vine.

This easy to grow annual can add loads of color to borders and containers with very little input. Hailing form Mediterranean areas of the world, bush morning glory plants like well drained soils that don't stay too wet. This makes them a great choice for use in rock gardens for seasonal color, but they also do just fine in regular garden soils. As they get started from seed, keep the plants watered regularly so they stay nice and moist until established.

It's also important to grow bush morning glories in full sun. This helps to keep plant habits from becoming too sprawling and makes sure there is a constant supply of blooms throughout their peak season. Too much shade can lead to floppy plants with an open habit that isn't very appealing in a garden setting. They also bloom much more poorly in lower light settings.

Because bush morning glories are such easy to grow plants, and also fast growers, you typically won't see plants available for sale. These plants are easily started from seed in the spring, and can be sown directly in the ground. The seeds have a fairly hard outer coating, so score them with a file or give them a little knick with a nail clippers to help them take up water more quickly. After they bloom, bush morning glory tends to seed about the garden some, and seeds can be collected for future years planting as well.

Lady's Slipper

Pink lady's slipper, aka moccasin Flower, is a large, showy wildflower belonging to the orchid family. It has two opposite basal leaves with conspicuous parallel veins and a large flower at the end of an erect stalk. The flower is magenta to whitish-pink; sometimes the whitish pink flowers will have darker pink venation.

The root of lady's slipper was used as a remedy for nervousness, tooth pain, and muscle spasms.

In order to survive and reproduce, pink lady's slipper interacts with a fungus in the soil from the Rhizoctonia genus. Generally, orchid seeds do not have food supplies inside them like most other kinds of seeds. Pink lady's slipper seeds require threads of the fungus to break open the seed and attach them to it. The fungus will pass on food and nutrients to the pink lady's slipper seed. When the lady's slipper plant is older and producing most of its own nutrients, the fungus will extract nutrients from the orchid roots. Pink lady's slipper takes many years to go from seed to mature plants. Pink lady's slippers can live to be twenty years old or more.

Pink lady's slippers also require bees for pollination. Bees are lured into the flower pouch through the front slit, attracted by the flower's bright color and sweet scent. Once inside, the bees find no reward, and discover that they are trapped, with only one point of escape. Inside the pouch, there are hairs that lead to a pair of exit openings, one beneath each pollen mass. The bee must pass under the stigma, so if it bears any pollen from a visit to another flower, it will be deposited before picking up a fresh load on the way out.

Lambert's Loco

Lambert Crazyweed, Loco (Oxytropis lambertii). Fabaceae (Legume family).

Lambert crazyweed is a perennial legume that often forms colonies by short rhizomes, with larger plants forming mounds. Moisture and temperature greatly influence the abundance of vegetative growth, and the plants sometimes die completely back to thick root crowns. Leaves arise directly from the root crown and are up to 8 inches long, with nine to 19 leaflets. The leaflets are hairy, and each silky hair is attached at its center with both ends free. Pink-purple to almost white flowers are displayed in terminal spikes on leafless stalks. The pods are sessile, oblong, beaked, silky and curved backward or inward.

The plant grows primarily on well-drained sandy or gravelly soils and often on rocky knolls in north central Texas, in the Panhandle and on the High Plains. It extends into similar regions of New Mexico, Oklahoma, Colorado and Kansas.

The toxic agent is the alkaloid swainsonine, which causes an enzyme dysfunction resulting in damage to the brain, liver, digestive organs, placenta, ovaries and testes. Cell damage is reversible except in the brain.

The plant is toxic to cattle, sheep, goats and particularly horses. Horses may display signs after consuming 30 percent of their body weight of the plant, and the lethal dose is around 75 percent of their body weight.

Cattle and sheep display signs of locoism after eating about 90 percent of their body weight over a 2-month period, and lethal doses in ruminants are usually around 200 to 350 percent of their body weight over several months.

Manystem Pea

Common Names: Perennial Sweet Pea, Perennial pea.

Bloom Color: Pink, Red, White. Main Bloom Time: Early summer, Late summer, Mid summer. Form: Spreading or horizontal.

lathyrus latifolius is a PERENNIAL CLIMBER growing to 2 m (6ft) by 2 m (6ft) at a fast rate.

It is hardy to zone (UK) 5 and is not frost tender. It is in flower from July to September, and the seeds ripen from August to October. The species is hermaphrodite (has both male and female organs) and is pollinated by Bees.

It can fix Nitrogen. Suitable for: light (sandy), medium (loamy) and heavy (clay) soils. Suitable pH: acid, neutral and basic (alkaline) soils. It can grow in semi-shade (light woodland) or no shade. It prefers dry or moist soil and can tolerate drought.

Habitats: Woodland Garden Sunny Edge; Dappled Shade; Shady Edge; Ground Cover; Meadow;

Although no records of toxicity have been found for this plant, the seed of some species in this genus contain a toxic amino acid that can cause a severe disease of the nervous system known as 'lathyrism' if they are eaten in large amounts (although small quantities are said to be nutritious). Great caution is advised.

Bloom Color: Blue , Purple , Violet

Bloom Time: June , July

Bloom Notes: Petals blue or violet, with red, purple or yellow streaks or spots.

Moss Campion

Moss campion is a common plant throughout the northern arctic and the high mountains of Europe and North America. In the United States, it can be found in alpine tundra in the West and in New England.

The word tundra comes from the Finnish word “tunturia” which means treeless land. Alpine tundra is found on mountaintops above the elevation where trees will grow. Harsh growing conditions characterize the environment here. Winters have long periods of sub-zero temperatures, blizzards, and high winds. Summers are short with freezing temperatures possible at any time, harsh drying winds, and intense sunlight. The soils tend to be rocky, dry, and nutrient poor.

Alpine tundra plants have special adaptations to cope with the harsh conditions. Most of them are small and ground hugging with small leaves and with buds tucked within the foliage for maximum protection. Most are slow-growing perennials. It appears that a cushion-like growth form works well in the alpine tundra because many unrelated alpine plants have adopted it. The cushion shape helps protect tender parts from frost and high winds, helps retain moisture, and holds in heat. Studies have shown that the temperature within a plant cushion can be up to 10 degrees centigrade higher than the ambient temperature.

Moss campion is a typical cushion plant. It makes tidy little ground-hugging mounds with only its small leaves exposed to the weather. The flower buds hide between the leaves until many of them pop out at once to cover the cushion with color. To appreciate its beauty, moss campion needs to be looked at close-up. The individual flowers are only about 0.4 inch across. In addition, your alpine visit needs to be well timed because these plants bloom for only a few weeks each summer.

Pipsissewa

Pipsissewa (Chimaphila umbellata) is a native Adirondack wildflower which produces a cluster of pink or white flowers in July, followed by colorful deep pink fruit capsules in August and September. Pipsissewa is also known as Prince's Pine. It is a member of the Pyrola family. Other common names for Pipsissewa include Waxflower, Common Pipsissewa, Noble Prince's-Pine, and Bitter Wintergreen.

The name Chimaphila is from the Greek cheima, meaning "winter weather" – a reference to the fact that the plant is evergreen, with leaves persisting through winter.

Pipsissewa is an evergreen plant classified as a subshrub. It grows four to ten inches high. The erect stems are slender and woody. Each year's growth puts out a few new branches, which eventually root and form mats.

The lance-shaped evergreen leaves of Pipsissewa are dark green and glossy. The leaves are one to two inches long and about a half inch wide; they are whorled with distinct sharp teeth along the edges.

Pipsissewa has several edible uses. The leaves of the Pipsissewa plant reportedly can be made into a tea or used as flavoring in root beer. The leaves have also been used to flavor candy and soft drinks.

In addition, Pipsissewa played an important medicinal role among North American Indians and settlers. It reportedly was used by many tribes to treat a wide variety of aliments, including fevers, colds, kidney stones, skin diseases, stomach ailments, chest pains, and chronic rheumatism. The plant was reportedly also used by some native Americans for backache.

Parry's Primrose

Parry's primrose (Primula parryi) is a member of the primrose family (Primulaceae) and is the largest and showiest of the North America primroses. It is 9 to 20 inches (15 to 50 centimeters) tall in clumped rosettes (usually) with broadly lance-shaped to egg-shaped leathery leaves. It is the most common Primula species in the western United States.

Its inflorescences with 5 to 25 magenta flowers on a long stem and brilliant green foliage is a rewarding treat to high country hikers that venture in the summer to the edge of melting snow or other moist areas along streams, springs and wet meadows, 8,800 to 13,800 feet (2700 to 4200 meters) above sea level.

Parry's primrose other unique trait for North America primroses contrasts unpleasantly to its beauty; the odor of the plant is rankly aromatic. The primrose's skunky smell can last years as a pressed, dry plant.

The plants name Primula parryi honors Charles C. Parry, an English physician of the 1800s. For over 40 years, he collected many plants and was the first botanist for the United State Department of Agriculture, a post that he held for three years. He was a well-respected botanist. As quoted in the Botanical Gazette upon his death in 1890, "Our western flora can hardly be touched at any point without encountering the name of Parry, our oldest and most distinguished botanical explorer. Hundreds of new plants were brought to light by him."

The Primula name for the genus comes from Latin primus, first; and; ulus, tiny, alluding to early spring blooming.

Red-Pod Stonecrop

Family: Crassulaceae, Stonecrop. Genus: Rhodiola. Synonyms: Sedum rhodanthum. Other names: rosecrown, red orpine.

General: succulent, hairless perennial with thick, fleshy rootstocks, usually without sterile shoots or rosette leaves, the stems generally clustered, erect, 5-30 cm tall.

Leaves: alternate, very numerous, several times as long as the internodes, narrowly oblong-lanceolate to elliptic-oblanceolate, strongly flattened but fleshy, 10-30 mm long, 2.5-5 mm broad, entire, rarely lightly toothed, persistent.

Flowers: closely crowded in a tight, terminal, often headlike cluster, with bracts at bases. The 5 petals distinct, nearly erect, narrowly oblong- lanceolate, pointed, 8-10 mm long, from greenish with only a pinkish tinge to deep pink or rarely nearly white. Stamens considerably shorter than the corolla. Anthers purple. July-August.

Fruits: clusters of 5 erect, distinct carpels, reddish, the styles short and bluntly tapered. Seeds with a very loose coat, ellipse-shaped, about 3 mm long.

Edible Uses: The leaves of rosecrown are edible, raw or cooked as a potherb. They can be chopped finely and added to salads. The leaves are best used when they are young.

Spreading Dogbane

Spreading dogbane is a showy member of the dogbane family (Apocynaceae) that is found in nearly all of the 50 states except some in the southeast. The common name, dogbane, and the genus name, “Apocynum,” meaning “away from dog,” are testaments to the toxic nature of this plant, not only to dogs, but to humans, livestock, and other mammals as well.

This perennial stands up to 2 feet tall, and the red stem branches multiple times giving it a wide-spreading appearance. Each branch is lined with opposite leaves that droop down. At the end of the branches are clusters of fragrant flowers. The flowers are small (just over ¼ inch wide), bell-shaped, and white with light pink stripes. Each flower produces 2 slender pods that release numerous small seeds tipped by a tuft of cottony hairs that aid in wind dispersal. Spreading dogbane, as the name suggests, tends to spread from underground rhizomes and form distinct patches.

The sap contains cardiac glycosides that are toxic to humans. The root also contains a potent cardiac stimulant, cymarin. These toxic compounds help protect spreading dogbane from grazing animals. Despite its toxicity, the plant has been used medicinally for a variety of ailments. However, this plant is best enjoyed for its beauty and not as a medicine. Native Americans used the tough fibers of this and other native dogbanes to make threads and cord.

Twinflower

Twinflower (Linnaea borealis) is a little waif of a plant found throughout the northern hemisphere in circumboreal habitats. Twinflower occurs in open forests, heaths, and open dry slopes in the mountains across the northern hemisphere from Siberia to Sweden and across North America.

The flowers are highly fragrant and last about seven days, typically appearing in June or July. The leaves are also twins, paired on opposite sides of the stem, are round and leathery.

The naming history of this plant is fascinating. Carl Linnaeus is a distinguished figure in the field of botany. Born in Sweden in 1707, he is considered the “Father of Modern Taxonomy”. In 1753, he published the Species Plantarum in which he defines the binomial or the genus/species naming system for plants that is still in use today. During his life he was responsible for the naming of nearly 8,000 plants, as well as many animals and the scientific designation for humans: Homo sapiens. Linnaeus used many of his supporters and detractors as inspiration for naming plants. The most beautiful of plants were often named in honor of his supporters and his detractors often supplied the names of common weeds or unattractive plants. Although he was described as being one of the most arrogant men in the history of science, his arrogance did not lead him to name plants after him. Linnaea borealis was reported to be Linnaeus favorite plant, and was named by his close friend and teacher Jan Frederik Gronovious in honor of Linnaeaus. The genus contains only this species with three subspecies, one for each of the continents of the northern hemisphere. Twinflower has historically been placed in the honeysuckle (Caprifoliaceae) family, but some recent reclassifications have placed this species in a family also named for Linnaeus: the family Linneaceae.

Canada Thistle

Canada Thistle (Cirsium vulgare). Description: Erect clump or patch-forming perennial forb to 39 inches tall, with extensive creeping roots and small unisexual flower heads; plants are male or female (dioecious), and dense patches of a single sex often occur; foliage and stems are spiny.

Leaves: Rosette leaves few or lacking; all leaves oblong to lanceolate, 2 to 8 inches long; margins nearly entire to shallowly lobed and toothed; main prickles 1/8 to 1/4 inch long; upper surfaces glabrous, green; lower surfaces sometimes sparsely woolly; leaf bases sometimes extend briefly down stems as inconspicuous prickly wings to 3/8 inch long; spiny stems slender, glabrous, and leafy.

Flowers: Flowers June to October; cylindrical or ovoid to bell- shaped unisexual flower heads numerous, often clustered; flower head bracts 3/8 to 1 inch long, 3/16 to 3/4 inch diameter, often, glabrous or with white woolly hair, spines 1/16 inch long; flowers pink, purple, or white (males 3/8 to 9/16 inch long, females 9/16 to 3/4 inch long).

Fruit: Achenes 1/16 to 1/8 inch long, ovate to elliptic, slightly compressed, smooth, glossy, tan; pappus bristles plumose and deciduous, 9/16 to 3/4 inch long, tan, forming a ring at the base and falling as a unit.

Habitat: Cultivated and disturbed or degraded sites in moist grassland, woodland, forest and riparian communities, and roadsides within elevations that generally range from 4,200 to 8,300 feet.

Comments: Native to Europe; heavy grazing and disturbances that create bare soil patches facilitate seedling establishment and survival. Arizona prohibited noxious weed, New Mexico Class. A noxious weed, and Oklahoma noxious weed.

Fairy Primrose

Fairy primrose plants are small, ornamental shrubs native to China, distinctive for their vibrant red and pink flowers. Though they are typically annual plants, fairy primrose can also be biennial plants or perennial plants, depending on how and where they are grown.

They are considered easy to cultivate, and their pinkish colors add a light and delicate air to gardens or windowsills.

Fairy primrose is a member of the Primula malacoides family of plants. Originally grown in China, they were first brought to the West by Scottish botanist George Forrest, who put them on display at Edinburgh's Royal Botanic Garden.

They are related to cowslip, oxlip, and auricular plants, which are also members of Primula family. Fairy primrose is sometimes known as Baby primrose.

The fairy primrose blooms from late winter to mid-spring. Their flowers grow in umbels, or clusters, where the youngest blooms are located at the center of the bunch. Colors of primrose blossoms can be rose, mauve, fuchsia, pink, or even white, and they boast a crisp, sweet scent.

A fairy primrose shrub is fairly small, ranging from 12–18 inches (30–45 centimeters). They are an evergreen plant, and their foliage is characterized by a slightly furry, light green texture.

Their leaves, which can grow to be 4 inches (about 10.2 centimeters) long, have been known to attract whiteflies, red spider mites, slugs, and snails. Dead leaves should always be removed from the fairy primrose.

Dwarf Clover

Trifolium nanum, the dwarf clover, is a perennial plant from the family Fabaceae. It was first recorded by Edwin James in 1820. Nanum means, "dwarf," in Latin.

Trifolium nanum is a perennial plant small species of clover growing in the Rocky Mountains. Often found at more than 11,000 feet, it is able to survive extreme conditions such as blizzards and extreme cold. Dwarf clover grows in dense mats to survive in its environment of dry, nutrient poor, rocky terrain. Flowers are pink and pea-shaped, blooming June through August.

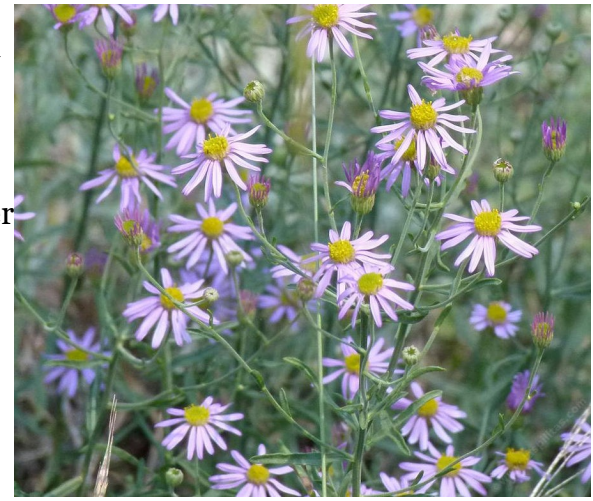
Clovers are wonderful plants that can contribute greatly to forage/livestock programs,to soil stabilization, and in other situations in which plant vegetation is desired. Benefits clovers can provide include improved forage quality, increased forage yield, biological nitrogen fixation, extension of the growing season, soil improvement, and land beautification.

However,the characteristics of clover species differ. Some are more tolerant of certain climatic conditions, soil conditions, and/or management regimes than others. Furthermore, clovers may also differ with regard to the particular benefits they provide (for example, if forage growth is desired at a specific time, one clover may be a much better choice than another).

Family: Pea family (Fabaceae). Habitat: Alpine summits, fell fields and dry meadows

The leaves are bright green and form dense, cushion-like mats. Tiny flowers are red-purple to yellow-white with dark purple tips. This tiny perennial plant grows very slowly – a plant the size of a small dinner plate may be 30 – 50 years old or older.

Western Meadow Aster



Western Meadoe Aster, Symphyotrichum spathulatum is a wide ranging and variable species, differing in growth form, leaf dimensions and flower color. Leaves are generally thin (a quarter of an inch or less), and relatively short, up to 5 inches; they grow close together in a rather untidy arrangement, most of the way along the stems. Leaf edges have a fine covering of short hairs. The involucral bracts (phyllaries) are dark green in color but lighter at the base, relatively broad, and do not curve outwards. Ray florets number 15 to 40, and tend not to overlap; the yellow disc florets (30 to 80) are also fewer than some similar species. There are four varieties, differing mostly in the phyllary characteristics.

It is native to much of western North America from British Columbia, California, and the Rocky Mountains region, to Arizona and New Mexico. , where it grows in many habitat types, generally at some elevation. It is a perennial herb growing to a maximum height near half a meter from a long rhizome. The thin brown stems are covered in rough hairs and resin glands. The leaves are a few centimeters long, linear to oval in shape, and often hairy. The glandular inflorescence holds several flower heads containing many violet ray florets around a center of long yellow disc florets.

The fruit is a hairy achene. It is a perennial herb growing to a maximum height near half a meter from a long rhizome. The thin brown stems are covered in rough hairs and resin glands. The leaves are a few centimeters long, linear to oval in shape, and often hairy. The glandular inflorescence holds several flower heads containing many violet ray florets around a center of long yellow disc florets. The fruit is a hairy achene.

Shooting Star

Shooting stars are a group of herbaceous perennials in the primula family (Primulaceae). There are over a dozen species in the genus Dodecatheon, all native to North America. The most widespread and common one is D. meadia (sometimes classified as Primula meadia), variously called shooting star, eastern shooting star, American cowslip, roosterheads, or prairie pointers.

Basal rosettes are produced from a fibrous root system in early spring. The smooth, lance-shaped leaves up to 6" long and 2½" across are emerald to greyish green, often with a reddish base and with a prominent central vein and smooth margins. The foliage only persists into summer, with plants going dormant after that. Over time rosettes may offset, with new plants developing slowly.

In mid-spring one or more thin but sturdy, green or red, leafless flower scapes up to 18 inches tall are sent up from the rosette of leaves. Each terminal umbel has 8-20 flowers that open in late spring. The one-inch long, dangling flowers each have five upward reflexed petals and a cluster of yellow stamens surrounding a single, purplish green style that converge to a downward point. Within any population the petals naturally vary widely in color from purple to pink or rose or white. The base of the fused petals have uneven rings of white, yellow and maroon around the base. Flowers are visited by bumblebees and some other native bees to collect pollen, but not honeybees as the flowers do not provide nectar. Pollinated flowers are followed by erect oval to cylindrical mahogany-colored capsules ¼ to ¾ inch long that contain very fine seeds that are dispersed when wind blows the capsules.

Pineywoods Geranium

Geranium caespitosum is a common species, often found along trails through wooded areas of the west. The reddish, short-hairy stems bear relatively large leaves at intervals, and bright pink to light purple flowers at the top, about 1.5 inches across. They consist of five elliptic to obovate petals, with a few darker veins running lengthwise, below and between which are five greenish-pink sepals, terminating in a short spike (acuminate). The lower portion of the petals have a partial covering of long, straggly white hairs. When the flower is fully open the petals bend back below the plane, and the ten stamens at the center also curve downwards.

Leaves are divided into lobes, but not quite to the same extent as the similar geranium viscosissimum. Common Names: Pineywoods Geranium, Purple Cluster Geranium, Purple Geranium, Purple Wild Geranium, Wild Geranium, Tufted Geranium.

The geraniums have developed a remarkable method of planting their seeds. The gynoecium splits into 5 1-seeded units (mericarps), each attached to a split length of style that coils like a spring. Falling to the ground, the spring coils and uncoils with changes in atmospheric humidity. If the spring lies against a grass stem or other fixed object, it drills the sharp pointed mericarp, containing the seed, into the earth.'

USES: Per the website Native American Ethnobotany are the following uses of Geranium caespitosum by Native American tribes: Keres, Western Drug (Dermatological Aid) Roots bruised into a paste for sores - Keres, Western Food (Fodder) Considered good turkey food - Gosiute Drug (Antidiarrheal) Decoction of roots used for diarrhea. Plant used as an astringent.

Colorado Tansy-Aster

Colorado tansyaster (Xanthisma coloradoense), is a small herbaceous composite with bold colorful deep lavender to almost dark-purple flowers. It is a perennial member of the sunflower family, Asteraceae, the largest plant family in the world with 23,000 species. The sunflower family is also commonly referred to as composites due to the type of flowering heads housing two different types of flowers; ray and disc flowers. Synonyms are numerous: Aster coloradoensis, Haplopappus coloradoensis, Machaeranthera coloradoensis, Machaeranthera coloradoensis var. brandegeei, Xanthisma coloradoense, Xylorhiza brandegeei.

Colorado tansyasters are striking with 20 to 35 magenta ray florets with a bright center of 50 to 150 yellow disc florets. However, the plant remains the same and it is no taller than 1 to 5.5 inches tall. Besides a stout taproot, it also has a sturdy branched caudex. The main stems are covered with villous (long, soft) hairs, while the peduncle(s) have an additional covering of minute, dense, white hairs (puberulent). The leaves are mostly basal, and the leaf margins are toothed. The involucre (which houses the flowering head), ranges from 1 to 2.5 centimeters wide.

Certain species within this genus (also known as Machaeranthera) have been used for respiratory, nose, and throat relief.

Fairy Slipper

Calypso bulbosa, commonly called Fairy Slipper, has a circumboreal distribution; in North America, it is found across Canada from Alaska to Newfoundland and in the northeastern and western United States. It produces a solitary basal leaf in the autumn which senesces soon after flowering. A solitary flower (rarely 2) is produced in the late spring, usually pink, magenta, or white, with a pouch-like labellum that can be spotted with contrasting colors such as yellow. Its lateral petals and sepals spread distinctively outwards. In most of North America, it is found in wet coniferous or mixed forests and bogs; in the northwest, it is found in drier, shady coniferous forests.

Calypso bulbosa is considered to be globally secure but is considered rare in a few states, including Vermont, Michigan, and Wisconsin.

Pollination: This orchid provides no reward but relies on bright color, anther-like hairs, and sweet smell to deceive naive pollinators, mainly newly emerged queen bumblebees.

Notes on Subspecies and Varieties: There are two varieties of this orchid in North America: Calypso bulbosa var. americana, which is widely distributed across Canada and the United States and has a white or pinkish labellum; and Calypso bulbosa var. occidentalis, which is found only in the northwestern regions of Canada and the United States, and has white and reddish markings on the labellum.

Ecosystem Type: Bogs, disturbed habitats, floodplains, forests, swamps, woodlands

Aspen Fleabane

Erigeron speciosus, referred to as aspen fleabane, belongs to the Astereae tribe of the Asteraceae or aster family. Common Names. Aspen fleabane, Oregon fleabane, Oregon wild-daisy, showy daisy, showy fleabane.

Aspen fleabane is widely distributed throughout western North America. Plants tolerate cold temperatures during the growing season, although flowering may be reduced with growing season frosts. Aspen fleabane is widely distributed throughout wet and dry habitats. It is common in upper elevation meadows, big sagebrush communities, quaking aspen, woodlands, and coniferous forests.

Aspen fleabane typically occurs at elevations of 2,000 to 11,220 feet (600-3,420 m). It is a long-lived perennial with a thick, branching fleshy to woody caudex, rhizomes, and a taproot and fibrous root system. Small colonies are common and plants may live for decades. Clusters of mostly erect leafy stems that range from 6 to 40 inches (15-100 cm) tall develop from the caudex. Plants growing in montane meadows in Gothic, Colorado, averaged 15 stems per plant.

Flower color and size factor into pollinator visitation. In subalpine meadows, blue copper butterflies (Lycaena heteronea) preferred the white flowers of common yarrow (Achillea millefolium var. alpicola) over purple aspen fleabane flowers, even when aspen fleabane flowers were painted white.

Aspen fleabane is eaten by mule deer, mountain goats, northern pocket gophers, golden-mantled ground squirrels, and domestic sheep. It is also likely consumed and preferred by greater sage-grouse.

Wild Rose

Roses are protected not by thorns, but by prickles. Strictly speaking, a thorn is a sharply pointed modified stem, always subtended by or adjacent to a leaf. A spine is a sharply pointed modified leaf. A prickle is a sharply pointed outgrowth of bark or epidermis. So, these sharply pointed structures differ in their developmental origins, and roses have prickles, not thorns.

Mountain rose blossoms have five petals that form a cup about two inches across. They have numerous pale yellow stamens (male structures) forming a fence and partial canopy over 20 to 35 pale green pistils (female structures). The blooms are short-lived, a day to a few days at best, and the bushes bloom just once per year. These bright, conspicuous flowers attract a great variety of pollinators, including honeybees, bumble bees, beetles and flies.

Fertile seeds develop in rose hips, bright red fruits that can be mushy or crisp and sweet, depending on the ripening conditions, though they become sweeter after a few frosts. Rose hips attract birds and small mammals which then disperse the seeds. Rose hips can also be dispersed by water, for occasionally rose hips drop into streams.

Modern laboratory studies have reported that rose hips have both antibacterial and antimicrobial activities, are high in vitamins C and E, and contain the carotenoids beta-carotene, lutein, zeaxanthin and lycopene. All of these things support health and some support healing. All Native American tribes in the Four Corners Area collected rose hips when they were available and either ate them immediately as snacks or mashed them, dried them in the sun and stored them for consumption in winter.

Prickly Rose

Rosa acicularis is a large, spreading shrub, characterized by branches bearing many thorns, some thin and bristly, others longer and more rigid. They, and the stems, have a reddish tint, while the abundant, green, pinnate leaves may also be red along the edges.

The cup-shaped flowers are large, up to 2.5 inches across, formed of five wide, overlapping petals around a center of short, thin, yellow-tipped stamens. Fruits (hips) are spherical, yellow to red in color. Plants can form dense colonies, spreading via roots. This a a common and widespread species, from north Canada to New Mexico, and was designated the state flower of Alberta in 1987. US distribution is mostly in the Rocky Mountains.

Prickly rose is circumpolar in the boreal forest region. It grows from Alaska to Quebec and New England. On the West Coast, its range extends as far south as British Columbia. It is found in Montana, Wyoming, Colorado, and northern New Mexico in the Rocky Mountains, and in North and South Dakota in the northern Great Plains.

Prickly rose is an important food source for grouse, snowshoe hares, and microtine rodents . In Alaska, snowshoe hares browse on prickly rose all year, but use is particularly heavy in summer. In Colorado, prickly rose is an important food item for mule deer which eat twigs and foliage in summer and fall. In Montana, browsing by mule deer is greatest in fall and winter. White-tailed deer browse on wild roses as do pronghorn, elk, moose, and mountain sheep. Black bear and grizzly bear eat prickly rose hips (fruits) in fall. Wild rose hips are eaten by songbirds and small mammals; upland gamebirds eat buds as well as hips. Larger fur-bearing mammals such as bears, rabbits, and beaver eat hips, stems, and foliage of roses.

Musk Thistle

Musk thistle is an ever-increasing problem in Colorado. It's a noxious weed prevalent in open spaces, vacant lots, pastures, ditch banks and along roadsides. Musk thistle is a biennial, which means it lives only two years. In the first year, it germinates from seed and grows into a low-growing rosette of leaves. The leaves are very prickly-spiny, and often have a white margin. In the plant's second growing season, it sends up multiple flowering stems. At this stage, the plant may grow two to six feet tall. As many as 100 flowers per plant develop in mid-summer through fall. Flowers are attractive purple-pink, about the size of a silver dollar. Just beneath the flowers are some very spiny bracts. After flowering and seed dispersal, the musk thistle plant dies.

The key to musk thistle control is to halt seed production. To accomplish this in the first year of the plant's life, sever the root below ground with a shovel or hoe when the plant is in the rosette stage. This can also be accomplished in the second year by severing the root before flowers develop. Mowing musk thistle in its second year is effective if it's done before any flowers mature. Herbicides are most effective when used on first year rosettes, especially in late summer or fall. Second-year plants that are developing flowering stems are much less susceptible to herbicides.

An introduced insect called the musk thistle seed head weevil feeds on developing seeds and can reduce the number of viable seeds produced by fifty percent or more.

Geyer Onion

Allium Geyeri, Geyer's Onion. Geyer's onion, allium geyeri, produces a thick green stalk, which bears a few leaves only at the base, and terminates in a compact, spherical cluster of between 10 and 25 pale pink, urn-shaped flowers; these have six pointed tepals (pink to white in color), curved at the base and pointed at the tip, enclosing a style and several stamens topped by yellow anthers. Two or three thin papery bracts are found at the base of the umbel, but these wither away during flowering

The plant is found over a wide range of habitats, from woodland and low foothills to the mountain tundra zone up to 12,000 feet. Two varieties are var tenerum, which has fewer flowers (up to five); instead the umbel includes several egg-shaped bulbils (small bulbs), and var geyeri, the usual form, with no bulbils and up to 25 flowers. Both are found over the same general area.

It is found in the Rocky Mountain States from New Mexico to Idaho, Great Basin, the Pacific Northwest, Texas, South Dakota, Arizona, Manitoba, British Columbia, Alberta and Saskatchewan.

Habitat: Steep, wet rock faces and ledges on south facing slope just above creek, with lush cover of Carex scirpoidea, Allium geyeri, Hemieva ranunculifolia, Cystopteris fragilis. Tepals white; outer bulb coats forming a fibrous mesh; plants common on wet ledges. Leaf material stored in silica gel.

Edible Uses: Bulb - raw or cooked. Used mainly as an onion-flavouring in soups etc, though they were also occasionally eaten raw. The bulbs are eaten by the Navajo Indians. The bulbs are up to 25mm long and 20mm in diameter. Leaves - raw or cooked. Flowers - raw. Used as a garnish on salads.

Pink Pussytoes

Children generally see the resemblance of the inflorescence to the paws of their kitty cat before their parents do so. Pussytoes are one of the best wildflowers to introduce children to the wonder and beauty of our native wildflowers.

Pink pussytoes are commonly encountered through out the mountainous areas of the western United States, the northern Great Plains, and Alaska.

Pink pussytoes, as well as several other species of pussy-toes, make an excellent choice for a native wildflower groundcover. They form wonderful, evergreen mats covering the ground throughout the four seasons. Each colony of pussytoes is a “clone” with all the plants connected to one another by underground rhizomes. New leaves that unfold in the spring are densely, downy pubescent. Gradually through the year and into the following winter the leaves lose this lustrous covering of white hairs giving the colony a two-tone appearance the following spring. The flowers of rosy pussytoes are the most beautiful of all the pussytoes. In the spring, leafy flower stalks arise from the centers of the older rosettes. The leaf stalks are densely pubescent. The flowers are set atop this stalk and give the appearance of a cat’s toes. The flowers are inconspicuous, yellow surrounded by rose-colored bracts; hence, the common name pink pussytoes. Interestingly, seeds may be set without sexual recombination (apomitic reproduction). In fact, when you look at the flowers of a group of pussytoes colonies male plants are much less common.

Pussytoes, in general, will grow in average, well-drained garden soil. It does want to be exposed to full sunlight and will not thrive if shaded by other plants.

Charming Wallflower

Erysimum capitatum is a species of wallflower known commonly as the sanddune wallflower, western wallflower, or prairie rocket.

This species can be found in regions across North America, from the Great Lakes to the West Coast of the United States. Some varieties have an extremely narrow distribution, especially those endemic to California.

Erysimum capitatum is a mustard-like plant with thin, erect stems growing from a basal rosette and topped with dense bunches of variably colored flowers. Flowers are most typically bright golden, yellow, or tangerine-colored, but plants in some populations may have red, white or purple flowers. Each flower has four flat petals. Seed pods are nearly parallel to the stem.

Subspecies: There are varieties or subspecies of this plant. Some are listed endangered species. For example, Erysimum capitatum var. angustatum, the Contra Costa wallflower, is an endangered plant in the state of California.

Little information on this wallflower species relationship with pollinators exists. Andrew Moldenke studied a population of Erysimum capitatum var. perenne in Subalpine Talus Fell Scree of the Timberland Hall Area (2,900–3,500 metres (9,500–11,500 ft) elevation). He observed 13 species of flower visitors, although over 80% of the visits to the flowers were performed by two ant species, Formica lasioides and one from the Formica fusca group.

In Zuni ethnobotany, an infusion of the whole plant is used externally for muscle aches. The flower and the fruit are eaten as an emetic for stomachaches.

Rosy Paintbrush

Castilleja exserta (formerly Orthocarpus purpurascens) is a species of plant in the genus Castilleja which includes the Indian paintbrushes. Its common names include purple owl's clover, escobita, and exserted Indian paintbrush.

This species is native to the Southwestern United States in various habitats of California, Arizona, and New Mexico; and to Northwestern Mexico. It is an introduced species in Hawaii.

Castilleja exserta is an annual herb about 100–450 millimetres (4–18 in) tall with a hairy stem covered in thready leaves. Like other related Castilleja plants, this species is a hemiparasite, deriving some of its nutrients directly from the roots of other plants by infiltrating them with haustoria. As a result, its own leaves are small and reduced.

Although this species is variable in appearance and easily hybridizes with other Castilleja species, it generally bears a brightly colored inflorescence of shaggy pink-purple or lavender flowers. The thin, erect bracts are usually tipped with the same color, giving the inflorescence the appearance of a paintbrush. This is a crucial host plant for the Bay checkerspot butterfly (Euphydryas editha bayensis), which is a threatened species that is endemic to the San Francisco Bay region in California.

The seeds were harvested by indigenous peoples of California for food.

Common Milkweed

Common milkweed is a member of the Asclepiadaceae (milkweed) family. It is one of about 115 species that occur in the Americas. Most species are tropical or arid land species. The genus name, Asclepias, commemorates Asklepios, the Greek god of medicine. Some of the milkweed species have a history of medicinal use including common milkweed (wart removal and lung diseases), and butterfly weed, A. tuberosa (also known as pleurisy root, used for pleurisy and other lung disease). The specific epithet, syriaca, means ‘of Syria’ in reference to Linnaeus's mistaken belief it was from Syria. It is a widespread and somewhat weedy species known from most of the eastern United States.

Flowers are greenish-pink to rosy pink to purplish-pink and very strongly and sweetly scented. Fruits (pods) are about 10 centimeters (4 inches) long, inflated and covered in little finger-like projections.

Over 450 insects are known to feed on some portion of the plant. Numerous insects are attracted to the nectar-laden flowers. Its sap, leaves and flowers also provide food. In the northeast and midwest, it is among the most important food plants for monarch caterpillar.

Milkweeds contain various levels of cardiac glycoside compounds which render the plants toxic to most insects and animals. For some insects, the cardiac glycosides become a defense. They can store them in their tissue which renders them inedible or toxic to other animals. Monarch butterflies use this defense and birds leave them and the caterpillars alone.

Rocky Mountain Bee Plant

Rocky Mountain Bee Plant (Cleome serrulata). One of the showiest wildflowers in the western and prairie regions of the United States is the beautiful pink-flowered Rocky Mountain Bee plant. Often found along dry roadsides and waste places, this annual herb that can grow up to 4-feet tall. It has an unpleasant odor and is mostly avoided by livestock. The stem leaves are divided into three linear-eliptic leaflets that are arranged alternately along the stem. The nectar-filled blossoms are clustered in elongated racemes near the top portion of the stems and attract a diverse array of pollinators, including bees, butterflies, and wasps. Each flower has four petals and sepals and six long showy stamens. This species has a long blooming season: anytime from May thru September, depending on location and elevation. The fruits are distinctive podlike capsules, up to four inches long, and droop downward from elongated stalks.

This species was one of the many new plants collected in 1804 during the Lewis and Clark expedition.

Cleome serrulata is an important cultural plant for many Southwestern Indian tribes. The young, tender shoots and leaves are good sources of vitamin A and calcium. In the past they were used as potherbs or medicinally as teas for fevers and other ailments. The seeds were ground and used to make gruel or bread. The Navajo still use the plant as a source of yellow-green dye for their beautiful wool rugs and blankets. Many pueblo tribes use a concentrated form of dye, made from boiling the plant into a thick black resin, to paint designs on pottery or for decorating their baskets.

Dotted Blazing Star

Liatris punctata is a species of flowering plant in the aster family known by the common names dotted gayfeather, dotted blazingstar, and narrow-leaved blazingstar. It is native to North America, where it occurs throughout the plains of central Canada, the central United States, and northern Mexico.

This perennial herb produces one or more erect stems 14 to 85 cm (6 in to 2 ft 9 in) tall. They grow from a thick taproot 1.3 to 5 m (4 ft 3 in to 16 ft 5 in) deep that produces rhizomes. The inflorescence is a spike of several flower heads. The heads contain several flowers which are usually purple, but sometimes white. The fruit is an achene tipped with a long pappus of feathery bristles. The plant reproduces sexually by seed and vegetatively by sprouting from its rhizome. This species is slow-growing and long-lived, with specimens estimated to be over 35 years old.

This species grows in a wide variety of habitat types, including ponderosa pine forests, sagebrush, chaparral, pinyon-juniper woodland, and many types of grassland and prairie. It is drought-tolerant because of its deep roots, though it does become less abundant in times of drought. It is also fire-tolerant, able to resprout from its rhizome and disperse its wind-carried seeds to soil cleared of litter by fire.

This plant is palatable to livestock and wild ungulates such as elk, white-tailed deer, and pronghorn. Its nectar is favored by lepidopterans, such as the rare butterfly Pawnee montane skipper (Hesperia leonardus montana), which is known to occur wherever the plant does. Native Americans ate the roots and leaves.

This species is considered good for revegetating prairie habitat. It is also used as an ornamental plant.

Elephant's Head

The unusual, elongated flower clusters of pedicularis groenlandica grow from the top half of its relatively tall, thick, ridged stalks (reddish when young, later green), the lower portions of which bear toothed, fern-like leaves. Individual flowers are characterized by a curved, projecting upper lip like the trunk of an elephant, and a three-lobed lower lip; the two side lobes resemble ears, while the middle lobe lies beneath, somewhat hidden.

The plant is quite common in its specific habitat of mountain streamsides and boggy meadows, seen in such locations as the Sierra Nevada, the Cascades, the Colorado Rockies and the Yellowstone-Grand Teton area. Pink is the usual flower color, but pure white varieties are sometimes found.

Elephant's Head grows to a height of around 70cm and forms dense colonies of plants in moist hollows or damp meadows. In a good year there are literally carpets of Elephant Head in favoured spots. In Rocky Mountain National Park, Elephant's Head (also referred to as Elephanthead) is more common on the western side than the east, and it occurs high up in the mountains.

The leaves of Pedicularis groenlandica are typical of louseworts. They look almost fernlike with long, narrow, pinately divided, sharp-toothed lobes.

Flowering time in the mountains is August and September.

Silky Phacelia

With its thick stalks of dark blue or purple flowers and silvery-pubescent fern-like leaves, the silky phacelia (Phacelia sericea) is one of the handsomest wildflowers of western North America. No surprise then that it is often sought for cultivation in the home garden, not just in its native range from southern Canada to northern California, Utah, and Colorado, but elsewhere with sufficiently cool temperatures to promote germination. Planting silky phacelia not only enriches a garden with color, it might also repay the gardener with a tiny pot of gold.

English scientists Christine Girling and Peter Peterson sampled silky phacelia and other plants growing on alluvial soils within a gold-mining region of southern British Columbia and found that the phacelia was able to accumulate more gold within its tissues than the other species. Plants are known to take up many other commercially valuable minerals and are sometimes used as biological assays to prospect for new deposits.

The genus Phacelia contains more than 150 species and is restricted to North and South America. New species of Phacelia continue to be uncovered, with six being named just since 2007 by Duane Atwood of Brigham Young University. Like other members of its genus, silky phacelia has flowers arranged in short clusters or fascicles (“phacelia” is from the Greek for fascicle) that are often coiled like the tail of a scorpion. The anthers of P. sericea are much longer than the bell-shaped corolla and help give the entire inflorescence a fuzzy appearance. The flowers are popular with bees.

Subalpine Larkspur

Delphinium barbeyi is a species of flowering plant in the buttercup family known by the common names subalpine larkspur, tall larkspur, and Barbey's larkspur. It is native to the interior western United States, where it occurs in the states of Arizona, Colorado, New Mexico, Utah, and Wyoming.

This species is a perennial herb growing up to 1.5 meters tall. The leaves line the stem but disappear from the lowest part of the stem by the time the plant blooms. The leaves are somewhat rounded in outline and are divided into several lobes. The tall inflorescence bears up to 50 flowers at a time, but a plant may produce hundreds of flowers. Each is borne on a pedicel up to 6 centimeters long. The flower has five dark purple-blue sepals with whitish or yellowish hairs inside. The fruit is a follicle up to 2.2 centimeters long.

The plant is long-lived, capable of exceeding 75 years of age.

It occupies wet habitat types in subalpine and alpine climates. It is a dominant member of the herb layer in many places. It can often be found growing beneath aspens.

This Delphinium commonly hybridizes with its relative, Delphinium glaucum. Hybrids may be more common in the habitat than individuals of the parent species. The hybrid is sometimes called the duncecap larkspur (Delphinium × occidentale). D. barbeyi also hybridizes with Delphinium ramosum and D. sapellonis.

Bumblebees and hummingbirds use the nectar from the flowers.

Purple Locoweed

Oxytropis lambertii (Lambert's Locoweed). Flower: Spike cluster up to 12 inches long on a hairy, leafless stem, with up to 25 flowers in a cluster and typically rising well above the leaves. Flowers are pea-shaped, deep pink to purple later turning blue, about ¾ inch long and stalkless. The erect upper petal (standard) is notched at the tip, sides rolled back, and has a large pale patch in the center streaked with darker lines. The 2 lateral petals fold over a keel that is abruptly tapered to a small projection (“beak”) at the tip. The calyx is 1/3 to ½ inch long, purplish, with short narrow teeth around the tip and covered in long, silky hairs. A small, hairy, leaf-like bract is at the base of the calyx.

Leaves and stems: Leaves are basal in tight rosettes surrounding or near a flowering stem, mostly erect to ascending, up to about 6 inches long, compound in groups of 9 to 19 leaflets. Leaflets are stalkless, linear-oblong, 1/3 to 1 inch long and covered in long, silky hairs. At the base of each compound leaf stalk is a hairy, lance-linear appendage (stipule), up to about ½ inch long with a sharply pointed tip. Flowering stems are multiple from the base, a plant forming a clump.

The Oxytropis lambertii plant is one of the locoweeds most frequently implicated in livestock poisoning. The toxin is called swainsonine. Research suggests that the plant itself may not be toxic, but becomes toxic when inhabited by endophytic fungi of the genus Embellisia, which produce swainsonine.

Pasque Flower

Other names: Eastern pasqueflower, American pasqueflower, Eastern pasque flower, Anemone patens, Pulsatilla hirsutissima, Pulsatilla ludoviciana.

Genus: Pulsatilla. Species: P. patens - P. patens is a compact, clump-forming, herbaceous perennial with rounded to heart-shaped, hairy, palmate, mid-green leaves divided into linear or lance-shaped segments and upright, broadly cup-shaped, lilac, violet-blue, or white flowers in late spring.

Foliage: Deciduous. Habit: Clump-forming, Compact. Toxicity: Can cause stomach irritation if eaten.

The leaves and flowers of the prairie crocus are covered in silky hairs, which help protect the plant from the cold. The flowers close at night. All parts of the plant are poisonous if taken internally, and irritating externally. This innocent-looking plant contains a toxin that slows the heart, and can lead to vomiting, diarrhea, convulsions and coma. It is used in homeopathic medicine.

On the prairies this crocus is not as common as it once was, and in our boreal region you have to look for it carefully to find it. Many have attempted to transplant this wildflower into the garden, with little success. The roots are deep, and are associated with fungi in the soil. For these reasons it does not transplant well. If you revisit the crocus patch later in the season, usually in July here, you can collect seeds from the fluffy seed-heads. Be sure to leave some seeds behind for the plants to regenerate. It takes three to four years to bloom from seed. The seed is best planted when it is fresh, as soon as it is collected, otherwise it goes dormant and will need stratifying (winter or cold for several weeks).

Queen’s Crown

Family: Rhodiola rhodantha. Common Names: Clementsia rhodantha, Sedum rhodanthum. (Queen's Crown, Rose Crown, Rose Root). Crassulaceae (Stonecrop Family)

Habitat: Subalpine, alpine. Meadows, tundra, wetlands. Summer.

Queen's Crown and King’s Crown are quite similar, having short succulent leaves on a thick, straight 8-13" stem topped by flower clusters. Both enjoy being in wet meadows, but King's Crown will often also be found in drier open woods and Rose Crown will commonly be found in quite wet high mountain meadows. Queen's Crown’s flower cluster is a rounded column.

Rhodiola rhodantha can reach a height of about 45 centimetres (18 in). These plants have small, lanceolate and succulent leaves without petiole. They are green at the bottom of the plant whereas at the top they are reddish. The flowers are hermaphrodite, may be rose or reddish and form an inflorescence. They bloom from July to August and the seeds ripen from August to September.

Rhodiola rhodantha seeds exhibit physiological dormancy, and require dry storage or cold treatment to germinate.

Shooting Star

Flowering from June to August, this member of the primrose family (Primulaceae) carries 1 to 10 pink to lavender flowers on an umbel that rises 10 to 35 centimeters from a basal rosette. Having 4 sepals, the new flowers point to the ground and gradually become more erect with age. The anthers are noticeably black.

As its common name implies, Dodecatheon alpinum is an alpine species. It grows in wet, semi-aquatic habitats of the mountains in the western states of California, Arizona, Nevada, Utah, Washington, and Oregon.

Though the species as a whole is not considered threatened, the majus subspecies has been given a T3 Vulnerable status according to the Encyclopedia of Life designation.

This plant is of special value to bumble bees and requires their ability to buzz-pollinate for successful pollination. Buzz-pollinations is a technique used by some bees, such as the Bombus morio and many other bumble bees, to release pollen which is more or less firmly held by the anthers.

Common shooting star blooms in mid-spring from May to June. The plant forms rosettes of long narrow leaves and singular slender stems. The flowers hang in umbels from the stems and are white to bright pink. The petals grow backward and up, away from the reproductive organs of the plant. These dangle down from the center and may be a pale yellow, pink, or even soft purple color. Flower color combinations are blue-purple, yellow-orange, or pink-red.

Showy Fleabane

Clusters of leafy stems,1/2-2 1/2 ft. tall, rise from the woody rootstock of this perennial. Each stem bears several showy, nearly 2 in. wide flower heads with from 70-150 blue, or rarely white, narrow rays.

A leafy stem branches near the top into leafless stalks, each with one flower head at the end, with many narrow pink, lavender or white rays surrounding a yellow disk.

The disk flowers are yellow-orange. The lower leaves of this plant tend to fall off as the season advances.

This Erigeron has one of the showiest heads, reflected in the species name, speciosus, which means "pretty." The similar Hairy Showy Daisy (E. subtrinervis) has spreading hairs over most of the stem and leaves.

Showy fleabane will form colonies. Divide mature plants when the rosettes begin to overlap. Remove fallen leaves from nearby trees in the fall, at they can smother the rosettes and cause them to rot.

Description: Seeds may be sown outside in late fall or the following spring without any cold treatment. Only a small percentage of the seeds will germinate, so sow thickly. Seeds require light to germinate. A more practical method of propagation is division. Separ

Seed Collection: Nutlets develop rapidly in the 2-3 weeks following bloom period. Collect seedheads in a paper bag when the nutlets begin to turn brown. Air-dry, clean and seal in a stored, refrigerated container.

Moss Campion

Silene acaulis, known as moss campion or cushion pink, is a small mountain-dwelling wildflower that is common all over the high arctic and tundra in the higher mountains of Eurasia and North America, (south to the Alps, Carpathians, southern Siberia, Pyrenees, British Isles, Iceland, Faroe Islands, Rocky Mountains). It is an evergreen perennial flowering plant in the carnation family Caryophyllaceae.

It is also called the compass plant, since the flowers appear first on the south side of the cushion. (Various other plants also have this name.)

Moss campion is a low, ground-hugging plant. It may seem densely matted and moss-like. The dense cushions are up to a foot or more in diameter. The plants are usually about 2" tall but may be as high as 6". The bright green leaves are narrow, arising from the base of the plant. The dead leaves from the previous season persist for years, and pink flowers are borne singly on short stalks that may be up to 1" long, but are usually much shorter. It usually has pink flowers, though very rarely they may be white. The flowers are solitary and star-shaped. They are between 6 and 12 mm wide, with hermaphrodite flowers being larger than the female ones. Female flowers produce better quality seeds than hermaphrodites[5] and male flowers produce better quality pollen than hermaphrodites. The cushions can change the gender of their flowers between years. Gender frequencies change with altitude, the frequency of female flowers increasing with higher elevation. They usually appear in June through August.[8] The flowers are held by a calyx which is rather firm and thick. The flowers are female, male or hermaphrodites.

Thistle

Bull thistle is a widespread biennial thistle originally from Europe and Asia, but now introduced throughout North America. Although it is intimidating in appearance and can sometimes form large infestations, this thistle is not as challenging to control as many others and is mainly a problem in hay fields and pastures

Bull thistle is a Class C Noxious Weed. Bull thistle might be confused with native thistles as well as more serious noxious weeds such as milk thistle, a Class A noxious weed, and creeping thistle, a Class C noxious weed that is much more difficult to control.

Bull thistle prefers sunny, open areas and can tolerate a wide range of conditions, from moist to dry soils, and is typically found in disturbed areas such as roadsides, trails, logged areas, vacant land, pastures and cultivated land. Overgrazed pastures are susceptible to bull thistle encroachment, and it can sometimes form dense stands that reduce productivity and stocking levels. Bull thistle may also dominate forest clear cuts and reduce growth of tree seedlings.

Bull thistle has a two year life cycle, flowering and setting seed in the second year. Seeds are short-lived on the soil surface but can persist for many years when they are buried, such as form cultivation activities. Seed germination generally occurs in the fall and spring. Basal rosettes form and continue to grow until winter and can grow quite large, up to 3 feet in diameter. Rosettes that are not large enough by spring may not flower until the following year. Flowering usually starts in mid-June and continues into early fall. Plants can be self-pollinated or insect-pollinated. Bull thistle does not reproduce vegetatively and does not have rhizomes.

Dwarf Clover

There are 95 species of clover in the United States and dwarf clover is the runt of the bunch. But, this plant justifies its small stature with where it manages to grow. Dwarf clover is at home on mountain tops in the Rocky Mountains from Montana to northern New Mexico.

It is often found at elevations above 11,000 feet, living in the seemingly barren alpine tundra above the elevation where trees will grow.

Harsh growing conditions characterize the alpine tundra environment. Winters have long periods of sub-zero temperatures, blizzards, and high winds. The summers are short, freezing temperatures are possible at any time, there are harsh drying winds, and the sunlight is intense. The soils tend to be rocky, dry, and nutrient poor.

To survive in the tundra environment, dwarf clover has adopted a growth strategy that is successful for many alpine tundra plants. It grows in ground-hugging mats or sometimes low cushion-like mounds, its small leaves stay compact against the plant's surface, and its flower buds hide between the leaves until many of them pop out at once to cover the plant with color.

The mat or cushion shape helps protect tender parts from frost and high winds, helps retain moisture, and holds in heat.

Like many alpine tundra plants, dwarf clover needs to be seen close-up to appreciate its beauty. But, a summer visit to the alpine tundra is exhilarating and well worth the effort to see alpine clover and its other ground-hugging tundra friends.

Wavelyleaf Thistle

Thistles (Cirsium ssp.) sometimes get a bad rap, since some members of this large and diverse genus in the Sunflower or Aster family (Asteraceae) are considered noxious weeds. Thistle species can also be difficult to distinguish, adding to the confusion. Introduced, noxious species of thistle include Canada thistle (Cirsium arvense) and bull thistle (Cirsium vulgare). But these often problematic species should not be mistaken for North America's many native thistles. One of the more common of our native plants is wavyleaf thistle (Cirsium undulatum). Primarily a western species, it grows from the arid plateaus of the Pacific Northwest to the Great Plains, and south into northwestern Mexico. It is also found sporadically in many eastern US states, but some of these populations may be introduced.

Wavyleaf thistle is a perennial with simple or branched stems. Leaves are densely hairy, lending a white or gray cast to the leaf surface, and are often deeply lobed, the lobes spine tipped. The discoid flowering heads are solitary to several per stem, and broadly urn shaped. Involucres (bracts subtending the flowers) range from 2.5-4.5 cm high. The phyllaries or individual bracts have a prominent glutinous ridge down the center and the outer phyllaries are spine tipped. Corollas are lavender, pink, or occasionally white. The pappus bristles are white..

Wavyleaf thistle is found in a variety of prairie habitats, pinyon-juniper woodlands, montane coniferous forests, and disturbed areas. As with many thistles, they are frequently visited by bumblebees and a variety of other pollinating insects. The pappus bristles are used by birds, such as goldfinches, to line their nests. Native Americans have many uses for wavyleaf thistle, from food to medicine.

Larkspur

Characteristics: Upland larkspur is an attractive perennial wildflower which usually is seen with one stem covered with variable herbage (varying from smooth surfaced to glandular or covered with soft, spreading hairs). The stem is not hollow and it varies in height from 15-40 cm. The leaves are mostly basal or found low on the stems. The petioles are longer than the diameter of the blades and individual leaf blades are 2-4 times parted or lobed into linear or oblong-lanceolate segments from 1.5-5 mm wide. The blades of the basal leaves measure from 2-6 cm wide. The upper leaves are smaller and have fewer leaf segments.

The inflorescence is a simple to compound raceme of 3-15 flowers. The pedicels of the lower flowers are usually several times longer than the flowers and they are spreading-ascending. The sepals vary from whitish to pale gray-blue and the more usual deep bluish-purple. The lowest 2 sepals range from 17-25 mm long while the lateral pair of sepals are the widest. The spur measures from 13-20 mm long. The lower petals are nearly white and faintly to deeply purplish lined, or they may be yellowish or brownish with a purplish tinge. The blade of the lower petal measures from 3-4 mm long and is deeply notched. The upper petals are bluish-tinged.

Range: Upland larkspur is found from southwest British Columbia south along the eastern slopes of the Cascade Mts. to northern California, and eastward to Alberta, and south to Arizona and the Rockies. It is one of the more common larkspurs across the inland Pacific Northwest.

Jewelled Shooting Star

Identification: The jeweled shooting-star has deep red-purple flowers. The petals bend backwards while the stamens form a cone in the center, giving the impression of a falling star or comet. The flowers are arranged in an attractive, nodding umbel at the top of a 1 -foot stem, above a basal rosette of leaves.

Biology-Natural History: The jeweled shooting-star belongs to the Primrose Family (Primulaceae). There are two Dodecatheon species in Pennsylvania. D. amethystinum is distinguished from D. meadia by a thinner fruit wall and the deeper redpurple flower color. Blossoms of jeweled shooting-star open in late April to May.

Habitat: This species is quite rare in parts of its natural range. It grows on moist, shaded areas of east and north facing limestone outcrops and river bluffs. The plants often occur on rock ledges that receive dripping water or along wet cliffs, but are also known from dry to moist alkaline bluffs.

Distribution: Mexico (Chihuahua, Durango).USA AlaskaUSA Ariz.USA Calif.USA Colo.USA IdahoUSA Mont.USA Nebr.USA Nev.USA N.Mex.USA N.Dak.USA Oreg.USA UtahUSA Wash.USA Wyo.Canada Alta.Canada B.C.Canada Man.Canada N.W.T.Canada Sask.Canada Yukon.

Shootingstars are widely cultivated, and numerous cultivars have been developed. Essentially all species are found in nurseries, although several are misidentified. Most can be grown is sunny to partially shaded places in dampish soil (when flowering) that slowly dries (when dormant). Most flower during the spring months and are especially attractive when planted in masses. None of the species has much of a history of medicinal use by Native Americans.

Fireweed

Chamaenerion angustifolium is a perennial herbaceous flowering plant in the willowherb family Onagraceae. It is known in North America as fireweed, in some parts of Canada as great willowherb,[1] in Britain and Ireland as rosebay willowherb. In the United Kingdom it is also known as bombweed, as a result of its rapid appearance on city bomb sites during the Blitz of World War II (1939 - 45). It is also known by the synonyms Chamerion angustifolium and Epilobium angustifolium. It is native throughout the temperate Northern Hemisphere, including large parts of the boreal forests.

The reddish stems of this herbaceous perennial are usually simple, erect, smooth, 0.5–2.5 m (1½–8 feet) high with scattered alternate leaves. The leaves are spirally arranged, entire, narrowly lanceolate, and pinnately veined, the secondary leaf veins anastomosing, joining together to form a continuous marginal vein just inside the leaf margins.

The inflorescence is a symmetrical terminal raceme that blooms progressively from bottom to top, producing a gracefully tapered shape. The flowers are 2 to 3 cm in diameter, slightly asymmetrical, with four magenta to pink petals and four narrower pink sepals behind. The protruding style has four stigmas.

The upright, reddish-brown linear seed capsule splits from the apex and curls open. It bears many minute brown seeds, about 300 to 400 per capsule and 80,000 per plant. The seeds have silky hairs to aid wind dispersal and are very easily spread by the wind, often becoming a weed and a dominant species on disturbed ground. Once established, the plants also spread extensively by underground roots, an individual plant eventually forming a large patch.

Aspen Fleabane

Erigeron speciosus is a widespread North American species of flowering plants in the daisy family known by the common names aspen fleabane, garden fleabane, and showy fleabane. It has been found in western Canada and the United States, from Alberta and British Columbia south as far as Arizona and New Mexico, with some isolated populations in the state of Baja California in Mexico.

Erigeron speciosus grows on in prairies and in open coniferous forests. It is a perennial herb up to 100 cm (40 inches) tall, producing underground rhizomes and a woody caudex. The inflorescence generally contains 2-20 flower heads per stem. Each head contains 75–150 white, lavender or blue ray florets surrounding many yellow disc florets.

This wildflower is extremely widespread across the western U.S. While the name refers to the ancient belief that plants in this genus repelled insects, it is at least attractive to many late summer pollinators such as leafcutter bees and syrphid flies – and it's a host plant for the schinia villosa moth. The aster-like flowers are very long lasting and arise from a clumping woody base.

This beautiful plant is the largest and showiest of fleabanes, and is excellently adapted to rocky or gravel soils. It tolerates some partial shade, it's very drought resistant, and manages to stay a compact 1 to 2 feet in height most of the time. This is a perfect plant for dry south facing slopes, or parched flower beds on the sunny side of a house.

Mountain Blue Violet

Viola adunca is a species of violet known by the common names hookedspur violet, early blue violet, sand violet, and western dog violet. It is native to meadows and forests of western North America, Canada, and the northern contiguous United States.

This is a hairy, compact plant growing from a small rhizome system. The leaves are spade- or heart-shaped, sometimes with broadly wavy margins. They are generally 1 to 4 centimeters long. The single-flowered inflorescence grows at the end of a long, very thin peduncle. The nodding flower is a violet with five purple petals, the lower three with white bases and purple veining. The two side petals are white-bearded near the throat. The upper two petals may have hooked spurs at their tips. It is a perennial.

The leaves and flowers are edible, and can be eaten in salads, as potherbs, or brewed as tea. These plant parts are high in vitamins A and C. However, the rhizomes, fruit, and seeds are poisonous to humans.

The Blackfoot apply an infusion of the roots and leaves to sore and swollen joints, give an infusion of the leaves and roots to asthmatic children, and use the plant to dye their arrows blue. The Dakelh take a decoction of the entire plant for stomach pain, the Klallam apply a poultice of smashed flowers to the chest or side for pain, the Makah chew the roots and leaves while giving birth, and the Tolowa apply a poultice of chewed leaves to sore eyes.

Alpine Columbine

Aquilegia saximontana, Rocky Mountain blue columbine. The Rocky Mountain blue columbine is endemic to small area of the Rocky Mountains in northern Colorado.

Aquilegia saximontana ranges in height from 5 to 25 cm. The foliage is glabrous and the leaves are green above and glaucous below. The flowers are nodding. The sepals are blue, 10 to 12 mm long, and spreading. The blades are cream colored, 7 to 8 mm long. The spurs are hooked, blue, 3 to 9 mm long. The stamens do not extend beyond the blades.

Aquilegia saximontana is found growing on rocky slopes in alpine and subalpine areas.

Notice that the spurs are “hooked,” an unusual morphology for spurs from the North American species of columbines.

Look Alikes: A. coerulea has long straight spurs and larger flowers.

Flowering/Fruiting Period: July/August.

Habitat: Cliffs and rocky slopes, subalpine and alpine. Elev. 9000-12,300 ft.

Aquilegia saximontana was described and the name validly published by Per Axel Rydberg in 1895.

Aquilegia saximontana is a species in the genus Aquilegia which contains between 117 and 141 species and belongs to the family of the Ranunculaceae (Buttercup Family). The type species of the genus is Aquilegia vulgaris.

Harebell

Campanula rotundifolia, the harebell, Scottish bluebell, or bluebell of Scotland, is a species of flowering plant in the bellflower family Campanulaceae. This herbaceous perennial is found throughout the temperate regions of the northern hemisphere. In Scotland, it is often known simply as bluebell. It is the floral emblem of Sweden where it is known as small bluebell. It produces its violet-blue, bell-shaped flowers in late summer and autumn.

The Latin specific epithet rotundifolia means "round leaved". However, not all leaves are round in shape. Middle stem-leaves are linear.

Campanula rotundifolia is a slender, prostrate to erect herbaceous perennial, spreading by seed and rhizomes. The basal leaves are long-stalked, rounded to heart-shaped, usually slightly toothed, with prominent hydathodes, and often wither early. Leaves on the flowering stems are long and narrow and the upper ones are unstemmed. The flowers usually have five (occasionally 4, 6 or 7) pale to mid violet-blue petals fused together into a bell shape, about 12–30 mm (15⁄32–1+3⁄16 in) long and five long, pointed green sepals behind them. Plants with pale pink or white flowers may also occur. The petal lobes are triangular and curve outwards. The seeds are produced in a capsule about 3–4 mm (1⁄8–5⁄32 in) diameter and are released by pores at the base of the capsule. As with many other Campanula species, all parts of the plant exude white latex when injured or broken.

Common Burdock

Arctium minus, commonly known as lesser burdock, little burdock, louse-bur, common burdock, button-bur, cuckoo-button, or wild rhubarb, is a biennial plant.

This plant is native to Europe, but has become introduced elsewhere such as Australia, North and South America, and other places.

Lesser Burdock produces purple flowers in its second year of growth, from July to October.

Outer bracts end in hooks that are like Velcro. After the flower head dries, the hooked bracts will attach to humans and animals in order to transport the entire seedhead.

Arctium minus can grow up to 1.8 metres (5 ft 11 in) tall and form multiple branches. It is large and bushy. Flowers are prickly and pink to lavender in color. Flower heads are about 2 cm (0.79 in) wide. The plant flowers from July through October.

The flowers resemble and can be easily mistaken for thistles, but burdock can be distinguished by its extremely large (up to 50 cm) leaves and its hooked bracts. Leaves are long and ovate. Lower leaves are heart-shaped and have very wavy margins. Leaves are dark green above and woolly below. It grows an extremely deep taproot, up to 30 cm (12 in) into the ground.

The leafstalks (a year old or younger) and flower stalks can be eaten raw or cooked. The roots are edible boiled with a change of water, though become too woody to eat in plants over a year old.

Spotted Knapweed

Centaurea stoebe, the spotted knapweed or panicled knapweed, is a species of Centaurea native to eastern Europe. It is also an invasive species in the United States, and particularly widespread in dryer regions of the West, which has a similarly dry climate as the Mediterranean. This species and Centaurea diffusa are tumbleweeds — plants that break free of their roots and tumble in the wind, facilitating the dispersal of their seeds.

Centaurea stoebe is a biennial or short-lived perennial plant, and it usually has a stout taproot and pubescent stems when young. It has pale and deeply-lobed leaves covered in fine short hairs. First-year plants produce a basal rosette, alternate, up to 6 inches (15 cm) long, deeply divided into lobes. It produces a stem in its second year of growth. Stem leaves are progressively less lobed, getting smaller toward the top. The stem is erect or ascending, slender, hairy and branching, and can grow up to three feet tall. The flowers are a vibrant pink flowers with black-tipped sepals that look like spots, which is the origin of its common name. The fruit is an achene (about a quarter-inch long) with a short, bristly pappus. It is primarily dispersed by wind.

Spotted knapweed likely spread to North America in an alfalfa shipment. By 1980, it had spread to 26 counties in the Pacific Northwest. Spotted knapweed primarily affects rangelands of the northwest United States and Canada. When spotted knapweed replaces native grasses, soil erosion and surface runoff are increased, depleting precious soil resources.

Bigelo Tansy-Aster

Aster, Tansy – Machaeranthera bigelovii. Also known as Bigelow's Aster and Colorado Aster.

This extremely drought tolerant perennial loves the sun or partial shade. Planted in bunches, this fairly tall species will provide a stunning splash of violet. Also known as Purple Tansy Aster or Sticky Aster, this western native will bloom in the late summer and fall. Plant this seed in bunches rather than mixed with other species for a splash of color. The established plants will grow well in sandy soil with little water.

As a late-season source of both pollen and nectar, asters provide the last opportunity to for many bee colonies to forage. Aster pollen serves as an important late season food source for a variety of bees, butterflies, and other pollinators including the next generation of bumblebee queens foraging prior to entering winter dormancy.

Range/habitat: CO, NM and AZ; plains, hills and mountains, typical in sagebrush grasslands from 6500-10,000 ft. elev.

Culture/uses: full sun, drought-tolerant, avoid over-watering. This is a good late bloomer for western and southwestern areas of higher elevations.

Both Dieteria bigelovii and Dieteria canescens have phyllaries in over-lapping rows and often with recurved tips (bending outward and downward). It is generally agreed that the tips of the phyllaries of D. bigelovii are more reflexed, longer, and more glandular hairy than those of D. canescens.

Leaves of both species are variable in shape, length, and the way they are attached to the stem.

Sticky Purple Geranium

Geranium viscosissimum, commonly known as the sticky purple geranium, is a perennial in the flowering plant family Geraniaceae. It is thought to be a protocarnivorous plant.

This herbaceous perennial plant is native to the Northwestern United States, California, and Nevada, including in the Great Basin and Rocky Mountains regions; and to Western Canada, including in the Canadian Rockies.

Habitats it is found in include yellow pine forest, northern juniper woodland, lowland to higher elevation meadows, and wetland-riparian zones; from 1,000–2,500 metres (3,300–8,200 ft) in elevation.

Geranium viscosissimum is a large, clumped 0.5–3 feet (0.15–0.91 m) tall perennial wild geranium. The stem, leaves, and flower stalks are covered with sticky hairs. The right-green leaves are dissected, many-toothed, and deeply-lobed. Its bloom period is April to September, depending on elevation and latitude. It has 1.5 inches (3.8 cm) saucer-shaped pink flowers with reddish-purple lines on the petals. They occur in an open cluster near the top of strong, branching 1–2 feet (0.30–0.61 m) flower stalks.

Carnivorous syndrome: In his 1999 journal article, G.G. Spomer tested several plants in the Pacific Northwest for the carnivorous syndrome, using the digestion of proteins as the diagnostic tool to determine which plants appeared to produce protease enzymes capable of breaking down potential prey. Geranium viscosissimum displayed a capability to digest and absorb the 14C-labeled algal protein placed on the sticky trichomes that the plant possesses.

Briton Scullcap

Scutellaria brittonii, also known at Britton's skullcap, is a flowering perennial native to Wyoming, Colorado, New Mexico, Nebraska, and Kansas in the United States. It is classified under the genus Scutellaria and is also part of the mint family, Lamiacaea. It grows on dry mountain slopes and in full sun.

Scutellaria brittonii is an upright, growing anywhere from 4"-8" tall in a given season. Leaves grow opposite each other on a square stem and are long and thin. The veins on the leaf surfaces are long and extend almost the full length of the leaf, close to parallel to one another.

Flowers generally grow in an upwards direction out of a calyx. The calyx is reddish purple and has a slit in the middle out of which the flower grows. The upper lip of the calyx has a width-wise ridge on the top. The flowers are composed of a hornlike tube which curves up and then opens to form a hooded flower.

The base of the tube is generally white, becoming more purple the farther it gets from the stem. The upper hood of the flower is narrower than the lower lip, which fans out below the hood. Flowers range from about 1"-1.5" in length and grow in clusters from the leaf nodes. All parts of the plant are covered in a myriad soft, short hairs.

Skullcap was once called mad-dog weed because of its use during the eighteenth century to treat rabies. In addition, Native Americans used skullcap as a sedative, tranquilizer, and digestive aid. Other cultures have used it as sedative and to lower fevers. Products containing skullcap should not be used in pregnancy or lactation. Before beginning herbal treatment. People should consult a physician, practitioner, or herbalist.

Hairy Clematis

Clematis hirsutissima is a species of flowering plant in the buttercup family known by the common name hairy clematis. It is native to much of the western United States, from Washington to Nebraska. It is a small, erect plant which, unlike other Clematis, does not generally produce vines. It is quite variable in appearance, especially across varieties. In general the hairy stem reaches up to about half a meter tall and has many hairy leaves divided into lance-shaped lobes. The inflorescence appears at the tip of the stem and bears a solitary flower. The flower is made up of an urn-shaped cup of deep purple-blue petallike sepals, which are fuzzy and have pointed or rounded tips. Rare individuals have white or pinkish sepals. There are no true petals. The fruit is a hairy achene with a very long beak and a plume on the end.

This charming dwarf bush clematis is home on the range from British Columbia south to MN and WY, where it can be found in prairies where the deer and the antelope roam. The tiny 1' tall upright rock garden specimens are clothed in hairy grey cutleaf foliage and topped, starting in early -April (NC) with solitary down turned purple bells...without question one of the cutest native plants in the US. Clematis hirsutissima has been used to treat everything from headaches to sinus pain. With its small size and slow growth rate, the wait for a cure may be worse than socialized health care.

The Navajo Indians used the root in the treatment of congested nose pain. Although no reports of toxicity have been seen for this species, some if not all members of this genus are mildly poisonous. The toxic principle is dissipated by heat or by drying. The seed floss makes an excellent tinder for starting fires, a spark from a flint will quickly ignite it. The seed floss can be used as an insulation in shoes etc.

Mountain Gentian

Gentiana parryi. Synonym: Pneumonanthe parryi. (Parry's Gentian, Bottle Gentian)

Gentianaceae (Gentian Family)

Common Names: Gentian, Blue Gentian, Fringed Gentian, Gall Plant,

Latin Name: Gentiana affinis, G algida, G. andrewsii, G. calycosa, G. parryi, G. saponaria, Gentianella amarella, G. quinquefolia, G. tenella, Gentianopis simples, G. thermalis

Parry's Gentian is found scattered in meadows where it shines through grasses with its brilliant blue/purple flower. The flower is pleated and the five petals are separated by unusual, slightly toothed projections. Plants range from a few inches tall on alpine tundra to eighteen inches tall on richer soils in subalpine meadows. Flower petals may be rounded or pointed.

Sunshine opens the tightly closed flower wide and deep, giving it a second common name, "Bottle Gentian".

Nineteenth century botanist Charles Parry made the first collection of this plant in Colorado in 1862 and in 1863 his friend George Engelmann named it Gentiana parryi. In 1904 Edward Greene renamed the plant Pneumonanthe parryi, the name accepted by William Weber. "Pneumo" is Greek for "the wind" or "lungs" and "anthus" is Greek for "flower".

Rocky Mountain Fringed Gentian

At one time taxonomists recognized more than 325 species in the genus Gentiana, ranging across the Northern Hemisphere and the Andes of South America. Most gentians have blue to purple flowers with four or five petals fused at the base into a tube. Often the area between the corolla lobes is pleated, or the lobes are variously fringed on their margins or at their base within the floral tube. The group of approximately 25 north temperate species with four fringed petals and lacking pleats are now placed in the genus Gentianopsis (literally translated as “Gentiana-like”) and called the fringed gentians. These species can also be recognized by their seeds that are covered by scale-like papillae (best seen under high magnification).

Meadow fringed gentian (Gentianopsis thermalis) is widespread across northern Canada and south through the Rocky Mountains to New Mexico, Utah, and Nevada. The species is sometimes split into two, with G. detonsa restricted to Canada and G. thermalis to the Rockies. Meadow fringed gentian is an annual with several stems arising from near the base and opposite leaves.

Gentians are still used medicinally in Europe in folk and commercial remedies to treat urinary infections and stimulate digestion. Native Americans also utilized certain species to treat headaches and as an antidote for witchcraft. More study is needed to determine if Gentianopsis has efficacy in warding off witches.

Rocky Mountain Iris

Iris missouriensis (syn. I. montana) is a hardy flowering rhizomatous species of the genus Iris, in the family Iridaceae. Its common names include western blue flag, Rocky Mountain iris, and Missouri flag. It is native to western North America. Its distribution is varied; it grows at high elevations in mountains and alpine meadows and all the way down to sea level in coastal hills.

Iris missouriensis is an erect herbaceous rhizomatous perennial, 20 to 40 cm high, with leafless unbranched scapes (flowering stems) and linear basal leaves, 5 to 10 mm wide, similar in height to the scapes. Each flower has three light to dark blue, spreading or reflexed sepals lined with purple and three smaller upright blue petals.

Some Plateau Indian tribes used the roots to treat toothache. Some tribes made cordage from the stems and leaves. The Navajo used a decoction of this plant as an emetic. The Zuni apply a poultice of chewed root to increase strength of newborns and infants.

This iris is listed as a weed in some areas, particularly in agricultural California. It is bitter and distasteful to livestock and heavy growths of the plant are a nuisance in pasture land. Heavy grazing in an area promotes the growth of this hardy iris.

The plant is widely cultivated in temperate regions.

Sky Pilot

Sticky polemonium, also frequently called sky pilot, is a member of the phlox family (Polemoniaceae), which has about 400 species in 18-25 genera. The majority of the phlox family grows natively in western North America. The diversity of species and genera is particularly high in California where 17 genera and over 170 species occur. The family has little economic importance, but includes many popular garden ornamentals. However, only Phlox (moss pinks, garden phlox, wild sweet Williams) and Polemonium (Jacob's ladder, sky pilot) are commonly available for use in home gardens.

Thomas Nuttall first collected sticky polemonium near the headwaters of the Platte River on his 1834-1837 western wanderings; he named and described the plant in 1848. Nuttall (1786-1859) was a British botanist and intrepid explorer of the American West.

Sticky polemonium is at home in the high mountains above 9,000 feet and in alpine tundra throughout much of the West. It likes rocky south-facing slopes and scree areas where the snow melts early and the soils warm up. The plant is an herbaceous perennial with intensely blue/purple flowers. Its leaves are succulent appearing, finely cut, upright, and often quite numerous in comparisons to the number of flowers. The name viscosum refers the sticky leaves.

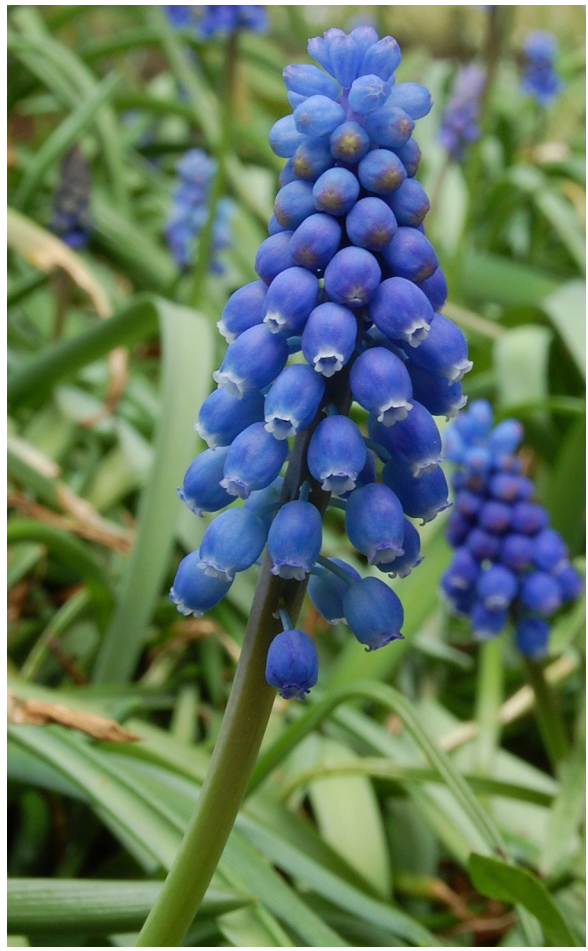
Alfalfa

Alfalfa (Medicago sativa), also called lucerne, is a perennial flowering plant in the legume family Fabaceae. It is cultivated as an important forage crop in many countries around the world. It is used for grazing, hay, and silage, as well as a green manure and cover crop. The name alfalfa is used in North America. The name lucerne is the more commonly used name in the United Kingdom, South Africa, Australia, and New Zealand. The plant superficially resembles clover (a cousin in the same family), especially while young, when trifoliate leaves comprising round leaflets predominate. Later in maturity, leaflets are elongated. It has clusters of small purple flowers followed by fruits spiralled in 2 to 3 turns containing 10–20 seeds. Alfalfa is native to warmer temperate climates. It has been cultivated as livestock fodder since at least the era of the ancient Greeks and Romans. Alfalfa sprouts are a common ingredient in dishes made in South Indian cuisine.

The word alfalfa is a Spanish modification of the Arabic word al-faṣfaṣa.

Alfalfa is a perennial forage legume which normally lives four to eight years, but can live more than 20 years, depending on variety and climate. The plant grows to a height of up to 1 metre (3 feet 3 inches), and has a deep root system, sometimes growing to a depth of more than 15 m (49 ft) to reach groundwater. Typically the root system grows to a depth of 2–3 m (7–10 ft) depending on subsoil constraints. Owing to this deep root system, it helps to improve soil nitrogen fertility and protect from soil erosion.[16] This depth of root system, and perenniality of crowns that store carbohydrates as an energy reserve, make it very resilient, especially to droughts. Alfalfa has a tetraploid genome.

Common Grape Hyacinth



Muscari is a genus of perennial bulbous plants native to Eurasia that produce spikes of dense, most commonly blue, urn-shaped flowers resembling bunches of grapes in the spring. The common name for the genus is grape hyacinth (a name which is also used for the related genera Leopoldia and Pseudomuscari, which were formerly included in Muscari), but they should not be confused with hyacinths. In the United States, they are also commonly referred to as bluebells, though certain regions reserve this name for bluebonnets instead. [citation needed] A number of species of Muscari are used as ornamental garden plants.

The flowers often become less tightly spaced as the flower matures. The flower colour varies from pale blue to a very dark blue, almost black in some cases (albino forms are also known). In some species the upper flowers may be of a different colour and shape to the lower flowers. Individual flowers are composed of six fused tepals forming a spherical to obovoid shape, constricted at the end to form a mouth around which the ends of the tepals show as small lobes or "teeth", which may be of a different colour to the rest of the tepal.

The Greeks eat them pickled. Their medicinal effect is particularly related to their high levels of vitamins C and antioxidants.

Two-Lobe Larkspur

Nuttall's larkspur is one of more than 60 native species of larkspur in the United States. It is among the more wide-ranging species, occurring from British Columbia and Alberta south to California, Arizona and New Mexico, and as far east as South Dakota and Nebraska. It grows in sagebrush desert, grassy shrublands, open conifer forests (especially ponderosa pine), at the edges of meadows, and along streams. It prefers well-drained gravelly soils, in moist but not wet sites. Soils can vary from acid to neutral or basic. It can be found from about 1,000 to 10,000 feet in elevation, and needs a sunny location.

The flowers appear in spring and early summer. They vary from light blue to deep purple, and may have white upper petals. The flowers are notable for the long "spur" projecting to the rear of the flower, which adds to the visual interest for many wildflower enthusiasts. The flowers are widely spaced on the upper end of stems from about six to eighteen inches tall. The number of flowers varies from just a few to about a dozen on a single plant. The leaves are deeply lobed, and most are located at the base of the plant, with a few smaller leaves borne along the flowering stem. The plant is a perennial, with fleshy roots.

All parts of the plant are toxic, and it has been involved in poisoning cattle on western rangelands. The primary toxic compounds are alkaloids (methyllycaconitine and nudicauline). The concentrations of these alkaloids vary from location to location, and vary with the age of the plant.

Monkshood

Aconitum columbianum subspecies columbianum (Monkshood)

Monkshood often is mistaken for its cousin Delphinium barbeyi; the two grow in similar moist habitats and both have broad, leafy, sometimes shrub-like growth, and very tall flower stalks. Delphinium, though, reaches seven feet tall and Monkshood only five. Monkshood flowers are most often intensely deep purple with a high arching hood. Delphinium flowers range from inky blue through violet to purple and have a distinctive spur.

Delphinium is far more common but a discerning eye will often find Monkshood growing with Delphinium. The pictured plants are just over two feet tall and will grow another foot or two.

Where you find one A. columbianum plant, you will almost always find several more of them since they reproduce both by seed and vegetatively, sprouting a tuber from the root crown. The tuber gives rise to another plant and can also send out a rhizome which produces another tuber and another plant.

Notice the characteristic deeply incised leaves of Monkshood.

Linnaeus named this genus in 1753 from a European specimen. The genus is circumboreal with about 100 species worldwide.

"Aconitum" is most often said to be derived from the Greek for "pointed stone" (which would have been tipped with a poisonous extract form the plant), but the Flora of North America indicates, "according to Pliny, the name "aconite" is taken from the ancient Black Sea port Aconis".

Rydberg Penstemon

Rydberg's penstemon is equally at home in alpine meadows above treeline and valley bottoms and streamsides from Washington and Montana to central California, northern Arizona, and New Mexico. Rydberg's penstemon has relatively small flowers (compared to other Penstemon species), but these are clustered in several dense, leafy whorls that interrupt the bare stem. The small flowers of P. rydbergii are apparently adapted for pollination by small bees that crawl into the corolla tube to drink nectar and pick up, transport, and deposit pollen in the process.

Rydberg's penstemon is one of nearly two dozen plant species named in honor of Per Axel Rydberg, a prominent Swedish-American botanist of the late 19th and early 20th centuries. Although originally trained as a railroad engineer, an accident left Rydberg permanently lame and in search of a less strenuous occupation. Rydberg turned his amateur interest in botany into a second career, rising to prominence as the curator of the New York Botanical Garden herbarium and authoring several early floras of the Black Hills, Colorado, Montana, Rocky Mountains, and Great Plains.

Over his prolific botanical career, Rydberg described nearly 1400 new species and genera of vascular plants from North America, earning him a reputation as a taxonomic "splitter", or someone who emphasizes morphological differences between plant populations (versus a "lumper", or taxonomist who places greater importance on continuities among populations). Marcus Jones, one of Rydberg's more acerbic contemporaries, accused him of "bughole botany," of naming new species based on the number of bugholes on each specimen. In Rydberg's defense, modern taxonomic concepts were still evolving in the early 20th century, and a large number of the taxa he named are still recognized, though often as varieties rather than full species.

Tall Penstemon

Penstemon strictus (Rocky Mountain Penstemon, Rocky Mountain Beardtongue)

Plantaginaceae (Plantain Family)

Foothills, montane, subalpine. Meadows, openings. Summer.

Penstemon strictus is showy, very common, and often appears in large colonies in Pinyon-Juniper woods and lower montane elevations. It blooms for many weeks and is, in many areas of the Four Corners, the most common and conspicuous Penstemon. It grows from one-to-three feet tall; has few, narrow, pointed, opposite stem leaves; and its numerous stems with numerous purple flowers (ranging from intensely deep purple to pale lavender-purple) are mostly secund, i.e.,wrapped to one side of the stem.

Penstemon strictus is always abundant on Mesa Verde's Prater Ridge Trail and even in 2001 after the extensive fire of the summer of 2000, the plant bloomed profusely. In 2005, when this photograph was taken, the fire-hardened soils were returning to normal and heavy winter and spring moisture produced an amazing bloom of Penstemon strictus -- and many other flowering plants on Prater Ridge.

"Strictus", from the Latin for straight, perhaps refers to the leaf or to the very straight stems -- which often, however, actually lean.

In actuality, the individual flowers are growing on both sides of the main plant stem, but the individual flower stems (the "pedicels") of all the flowers on the right side of the stem bend around the stem and point to the left.

Dusky Beardtongue

This darkly beautiful wild flower is one of the many species of penstemons that grow throughout the Rocky Mountains.

It is nmed after railroad route explorer Amiel Weeks Whipple (1816--1863) who surveyed possible routes for the Transcontinental Railroad from Arkansas through the Panhandle of Oklahoma and onwards to Los Angeles.

Description: Penstemon whippleanus grows up to 20 centimetres in height and is a welcome sight when many of the earlier wildflowers are beginning to die back. The plants often have a number of flower spikes.

Habitat: This species grows in montane, subalpine, and alpine open forests, clearings and on roadsides.

Distribution: This penstemon can be found in the Rocky Mountain National Park. It flowers late in the season - from the end of summer and into autumn

The specimens shown on this page were photographed in Rocky Mountain National Park in late August.

Penstemon are generally evergreen and have beautiful flowers that are very attractive to hummingbirds. Most varieties are rabbit resistant.

Native Americans long used penstemon roots to relieve toothache. Fieldwork in the remote parts of the Great Basin during the 20th century brought the total number of species known to over 250. In 1946 the American Penstemon Society was formed to promote both horticultural and botanical interest.

Butterflyweed

Butterfly weed is a member of the milkweed family (Asclepiadaceae). The genus name Asclepias is named after the Greek god of medicine Asklepios. The species name tuberose refers to the tuberous (knobby and with swellings) roots.

Butterfly weed grows commonly in dry open habitats and is very common in the prairies and grasslands of the Midwest and Great Plains. This beautiful native wildflower is found from Maine to South Dakota to the desert southwest to Florida.

Native Americans harvested fibers from the dried stems that were made into ropes and used in weaving cloth. Many tribes used various parts of the butterfly weed as food. In colonial America, dried leaves of butterfly weed and skunk cabbage were made into a tea to treat chest inflammations thus giving butterfly weed an alternative name: pleurisy root. Pleurisy root was listed in the American Pharmacopoeia and the National Formulary until 1936.

Butterfly weed is a coarse perennial forb consisting of many stems. The stems are straight and very hairy. The leaves are alternate and simple. Unlike other species of milkweed butterfly weed does not contain the characteristic thick milky sap but instead has a watery translucent sap. The inflorescence is slightly rounded to flat and made up many individual flowers. The flower consists of five petals pointing down and topped by a crown of five erect hoods. The fruit is a pod containing numerous brown seed each with a tuft of silky white hairs. Many a child and adult have gleefully pulled the seeds from a ripened, opened pod and let them float gracefully on a gentle breeze.

Claret Cup

General Desc: These cacti often form large rounded mounds composed of many individual stems (3 inches to 6 inches in length and 2 inches to 3 inches in diameter) that are tightly packed together. Each stem has 9 or 10 ribs.

Identification notes: Distinguished from E. triglochidiatus by having round spines, while the former has angled or flattened spines. Notably, this species is functionally dioecious, plants produce fertile male or female flowers on separate plants.

Height: To 6 inches Width: To 3 inches

Echinocereus triglochidiatus is a species of hedgehog cactus known by several common names, including kingcup cactus, claretcup, and Mojave mound cactus. This cactus is native to the southwestern United States and northern Mexico, where it is a resident of varied habitats from low desert to rocky slopes, scrub, and mountain woodland. It is most abundant in shady areas.

A number of varieties of this highly variable cactus species are known, but not all are universally recognized. In general, it is a mounding cactus, forming bulbous piles of a few to hundreds of spherical to cylindrical stems. It is densely spiny and somewhat woolly. The showy flower is a funnel-shaped bloom up to 8-9 cm wide and bright scarlet red to orange-red tepals. A thick nectar chamber and many thready pink stamens are at the center of the corolla. The flowers are pollinated by hummingbirds.

Indian paintbrush

Indian paintbrush is an attractive member of the parasitic Broomrape family (Orobancaceae). This species was formerly placed in the Figwort family (Scrophullariaceae), which was a hodgepodge of genera that didn't fit well in other families.

This plant is also called painted cup for the showy cup-like bracts. The genus name "Castilleja" is named after Spanish botanist Domingo Castillejo, and "coccinea" means "red," referring to the red bracts that surround the flowers.

The showy red structures are technically bracts, a type of modified leaf, and not petals. The actual flower petals are rather inconspicuous, although the tip of the sepals are tinged with red as well. Also, there is a form of this species that has yellow bracts (Castilleja coccinea f. lutescens), as well as a separate closely related species that also has yellow bracts (Castilleja sessiliflora).

These plants are hemiparasites, meaning that although these plants are green and can photosynthesize, they also have the ability to sequester nutrients from other organisms, in this case, from perennial grasses. Despite being obligate parasites for part of their lives, these plants do rely on pollinators for reproduction. A variety of insects visit paintbrush flowers, especially bees. This is somewhat surprising since the color red is difficult for insects to see.

However, like most red flowers, this species is especially adapted for pollination by hummingbirds. Hummingbirds have long bills that allow them to reach the nectar rewards at the end of long, tubular flowers. Also, the lack of a lower petal lip denies insects a perch to rest on, favoring hovering organisms like bees and hummingbirds.

Wild Lily

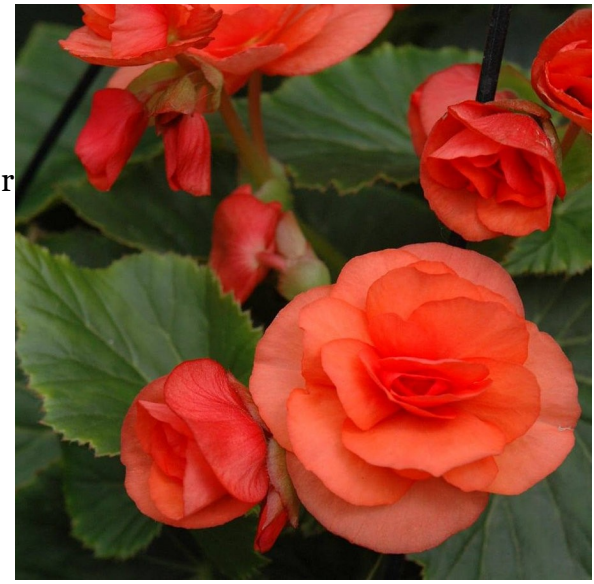
Hemerocallis fulva, the orange day-lily, tawny daylily, corn lily, tiger daylily, fulvous daylily, ditch lily or Fourth of July lily (also railroad daylily, roadside daylily, outhouse lily, and wash-house lily), is a species of daylily native to Asia. It is very widely grown as an ornamental plant in temperate climates for its showy flowers and ease of cultivation. It is not a true lily in the genus Lilium, but gets its name from the superficial similarity of its flowers to Lilium and from the fact that each flower lasts only one day.

It is an herbaceous perennial plant growing from tuberous roots, with stems 40–150 cm (16–59 in) tall. The leaves are linear, (1 ft 8 in–4 ft 11 in) long and (½–1+¼ in) broad. The flowers are (2–4+¾ in) across, orange-red, with a pale central line on each tepal; they are produced from early summer through late autumn on scapes of ten through twenty flowers, with the individual flowers' opening successively, each one's lasting only one day. Its fruit is a three-valved capsule (¾–1 in) long and (½–⅝ in) broad which splits open at maturity and releases seeds.

Both diploid and triploid forms occur in the wild, but most cultivated plants are triploids which rarely produce seeds and primarily reproduce vegetatively by stolons.[5] At least four botanical varieties are recognized, including the typical triploid var. fulva, the diploid, long-flowered var. angustifolia (syn.: var. longituba), the triploid var.

The flowers, leaves, and tubers of the orange daylily are edible. Leaves and shoots can be eaten raw or cooked when very young (or they become too fibrous). The flowers and young tubers can also be eaten raw or cooked. The flowers can be dried and used as a thickener in soup. The cooked flower buds, served with butter, taste like green beans or wax beans. The tubers are a good potato substitute.

Sand Begonia



Solenia Orange Begonia features dainty orange frilly flowers at the ends of the stems from mid spring to mid fall. Its succulent heart-shaped leaves remain green in color throughout the year. The fruit is not ornamentally significant.

Other Names: Hiemalis Begonia.
Group/Class: Rieger Begonia.
Ornamental Features: Solenia® Orange Begonia features dainty orange frilly flowers at the ends of the stems from mid spring to mid fall. Its succulent heart-shaped leaves remain green in color throughout the year. The fruit is not ornamentally significant.

Landscape Attributes: Solenia Orange Begonia is an herbaceous annual with a mounded form. Its medium texture blends into the garden, but can always be balanced by a couple of finer or coarser plants for an effective composition.

This is a high maintenance plant that will require regular care and upkeep, and usually looks its best without pruning, although it will tolerate pruning. Deer don't particularly care for this plant and will usually leave it alone in favor of tastier treats. Gardeners should be aware of the following characteristic(s) that may warrant special consideration; Insects, Disease.

Solenia Orange Begonia will grow to be about 12 inches tall at maturity, with a spread of 12 inches. The flower stalks can be weak and so it may require staking in exposed sites or excessively rich soils. Although it's not a true annual, this plant can be expected to behave as an annual in our climate if left outdoors over the winter, usually needing replacement the following year.

Wood Lily

Common Name(s): Northern Red LilyRed LilyWood Lily. Previously known as: Lilium umbellatum.

Description: Wood Lily is a perennial wildflower native from the east coast to the midwest of North America. It can be found in the mountains of NC in dry woods, meadows, and prairies. This plant can vary widely as to color and size depending on its location and is one of the most wide-spread lilies in North America. The upward-facing orangish-red blooms are in groups of 1-3 and occur in early to mid-summer.

This plant prefers sandy to loam soils in full sun to partial shade. Use in the native pollinator or butterfly garden in small groups. They can be slow to establish.

The petals of wood lily narrow at the base, giving the flower an intriguing see-through aspect.

Wood lily is North America's most wide ranging true lily, but it has been declining in the northeast as prairie habitat has disappeared, and as populations of white-tailed deer, that favor it as food, have increased. In New England it is pollinated by tiger swallowtail butterflies.

Intense eye-catching orange blooms steal the show in June and July. Wood Lilies are beautiful to see in alone or in masses and they are a favorite of Hummingbirds. Wood Lilies grown from seed are very slow growing will take 5-7 years to bloom. Never pick Wood Lilies flowers as you will likely pull up the bulb and kill the plant.

Wholeleaf Indian Paintbrush

Genus Information: In North America there are 109 species and 166 accepted taxa overall for Castilleja. World wide, The Plant List includes 204 accepted species names and includes a further 238 infraspecific rank for the genus.

In the Southwestern United States, Arizona there are 16 species of Castilleja, in California there are 36 species, Nevada has 20 species, New Mexico has 21 species, Texas has 09 species, Utah has 15 species. All data is approximate and subject to taxonomic changes.

There are 2 varieties in Castilleja integra; Castilleja integra var. gloriosa, Wholeleaf Indian Paintbrush, (AZ); Castilleja integra var. integra, Wholeleaf Indian Paintbrush, (AZ, CO, NM, TX).

The Wholeleaf Indian Paintbrush as well as the Sierra Woolly Indian Paintbrush (Castilleja lanata), which also is found in Arizona, are host species for the caterpillar larvae of the Fulvia Checkerspot Butterfly, Chlosyne fulvia. In Southwestern Desert Flora also see Exserted Indian Paintbrush, Castilleja exserta. Castilleja integra has been used for a variety of purposes by South American indigenous peoples.

Apache, White Mountain Dye, Unspecified, Root bark used with other substances to color various kinds of skins, especially deer skin. Jemez Other, Preservative, Dried bracts mixed with chile seeds to prevent spoilage during storage. Keres, Western Other, Ceremonial Items, Plant held by women for decoration during the harvest dance. Navajo, Ramah Drug, Blood Medicine, Compound decoction of root used to 'clean out the blood' after internal injury. Navajo, Ramah Drug, Gynecological Aid, Decoction of leaf taken during pregnancy to keep baby small, for easy labor. Zuni Dye, Black, Root bark used with minerals to color deerskin black.

Orange Agoseris

Agoseris aurantiaca is a species of plant in the sunflower family, commonly called orange agoseris or mountain dandelion. It is widespread and common in western North America from Alaska and the Northwest Territories in Canada southward to California, Arizona, and New Mexico, and eastward as far as the Rocky Mountains and the Black Hills. There are also isolated populations in the Chic-Choc Mountains on the Gaspe Peninsula and in the Otish Mountains of central Quebec.

Agoseris aurantiaca is primarily a species of mountainous regions and may be found in wet to dry habitats. It is a perennial herb producing a basal rosette of leaves. There is no stem, but it does produce several stem-like peduncles, each peduncle bearing a single flower head surrounded by glabrous to hairy phyllaries. The head is ligulate, containing several ray florets but no disc florets. The florets are most commonly orange but are occasionally yellow, pink, red, or purple. "Aurantiaca" means "orange-red". The flower head matures into a ball-like head of beaked achenes, each with a terminal pappus of numerous, white bristles.

Varieties: Agoseris aurantiaca var. aurantiaca - most of species range. Agoseris aurantiaca var. purpurea (A.Gray) Cronquist - southern Rocky Mountains.

A cold infusion of this plant is used by the Ramah Navajo for protection against witches.

About the Author

Larry W Jones is a songwriter, having penned over 7,700 song lyrics. Published in 22 volumes of island themed, country, cowboy, western and bluegrass songs. The entire assemblage is the world's largest collection of lyrics written by an individual songwriter.

As a wrangler on the "Great American Horse Drive", at age 68, he assisted in driving 800 half-wild horses 62 miles in two days, from Winter pasture grounds in far NW Colorado to the Big Gulch Ranch outside of Craig Colorado.

His book, "The Oldest Greenhorn", chronicles the adventures and perils in earning the "Gate-to-Gate" trophy belt buckle the hard way.

Other books published by Larry W Jones:

A Squirrel Named Julie and The Fox Ridge Fox
The Painting Of A Dream
The Boy With Green Thumbs and The Wild Tree Man
Red Cloud – Chief Of the Sioux
Spotted Tail – The Orphan Negotiator
Little Crow – The Fur Trapper's Patron
Chief Gall – The Strategist
Crazy Horse – The Vision Quest Warrior
Sitting Bull - The Powder River Power
Rain-In-The-Face – The Setting Sun Brave
Two Strike – The Lakota Club Fighter
Chief American Horse – The Oglala Councilor
Chief Dull Knife – The Sharp-Witted Cheyenne
Chief Joseph – Retreat From Grande Ronde
The Oregon Trail Orphans
Kids In Bloom Volume 1
Kids In Bloom Volume 2
Kids Animal Pals Volume 1
Kids Animal Pals Volume 2
Bird Kids Volume 1
Bird Kids Volume 2
Garden Kids Volume 1
Garden Kids Volume 2
Folklore Of Jackson Hole
Henny Penny Meets Chicken Little
Delightful Stories For Children
The 1825 Voyage Of HMS Blonde
Illustrated Stories For Young Children
Sea Sagas – Perilous Voyages
Songbirds And Their Stories

Other books published by Larry W Jones:

The Jungle Book – Mowgli's Brothers
The Jungle Book – Kaa's Hunting
The Jungle Book – Tiger! Tiger!
The Jungle Book – The White Seal
The Jungle Book – Rikki-Tikki-Tavi
The Jungle Book – Toomai of the Elephants
The Jungle Book – Her Majesty's Servants
The Oldest Greenhorn – Second Edition
Life On The Mississippi
Songs Of The Seas
Treasure Island
The Wind In The Willows
Alice In Wonderland
Peter Rabbit
The Secret Garden
Heidi
Cynthia Ann Parker – Comanche Bride
Black Beauty
The Call Of the Wild
Uncle Remus and Brer Rabbit
Twenty Thousand Leagues Under the Sea
The Goodnight-Loving Trail – A Chuckwagon Saga

All his publications are available on Lulu.com